

SVY210088011

SEE SHEET SVY210088012

Rev	Date	Details	By	Ckd	App

Drawn	SSM	Signed		Date	10/11/2022
Surveyed	SRH	Signed		Date	04/11/2022
Checked	PNK	Signed		Date	22/11/2022
Approved	PNK	Signed		Date	22/11/2022

Notations
 Date of survey - 04/11/2022
 Co-ordinate datum is MGA94 Zone 55 wide MelbPOS GNSS observations
 Level datum is Vide Best Fit To MONBULK PM68 (RL248.733 and WANDIN YALLOCK PM160 (RL286.063)
 Grid interval is 100m
 Contour Interval : 0.2m
 Melway reference - 122G9

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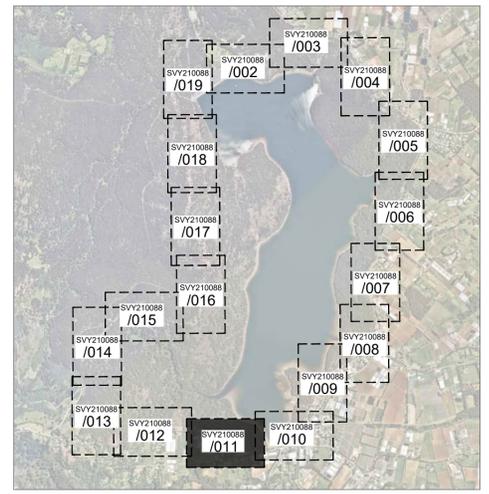
Melbourne Water
 MELBOURNE WATER CORPORATION
 990 La Trobe Street, Docklands 3008

Project
SILVAN RESERVOIR
 VIC 3795
 File Ref: SVY210088

Plan title
FEATURE AND LEVEL
SURVEY PLAN
 SHEET 011 of 019

Taylor's reference	S20303-S210-D011
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Sheet size	A1
MWC plan number	SVY210088/011
Rev	A

SHEET INDEX



SEE SHEET 1 FOR OVERALL KEY SHEET



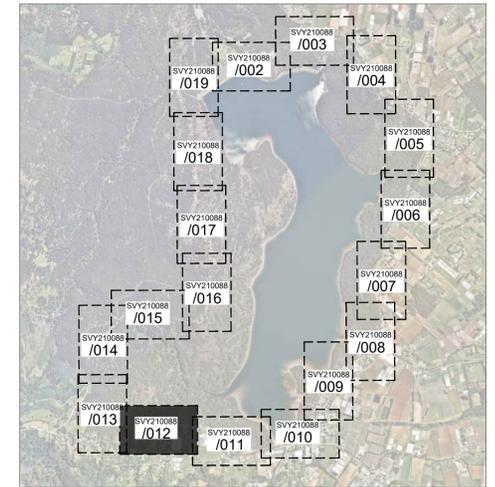
AUSTRALIAN
HEIGHT DATUM

MAP GRID AUSTRALIA
MGA94 ZONE 55

THE MAPBASE SHOWN HAS NOT
BEEN VERIFIED BY FIELD SURVEY

LEVELS MAY EXIST THAT HAVE BEEN
TURNED OFF FOR PLOTTING CLARITY

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Approved	Signed	Date	
PNK	Signed	22/11/2022	

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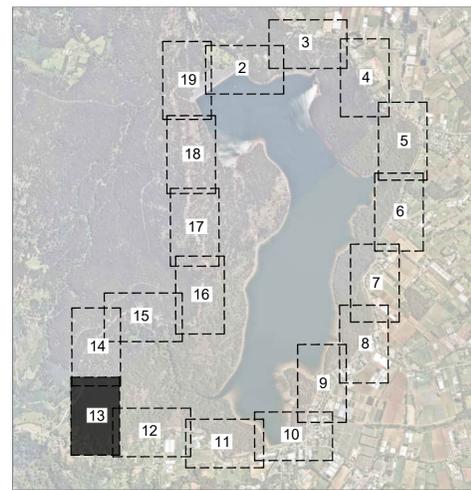


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SILVAN RESERVOIR
 VIC 3795
 File Ref: SVY210088

Plan title
FEATURE AND LEVEL
SURVEY PLAN
 SHEET 012 of 019

Taylors reference	
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FEATURE AND LEVEL
SURVEY PLAN
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Plan title

SILVAN RESERVOIR
VIC 3795
File Ref: SVY210088

Project



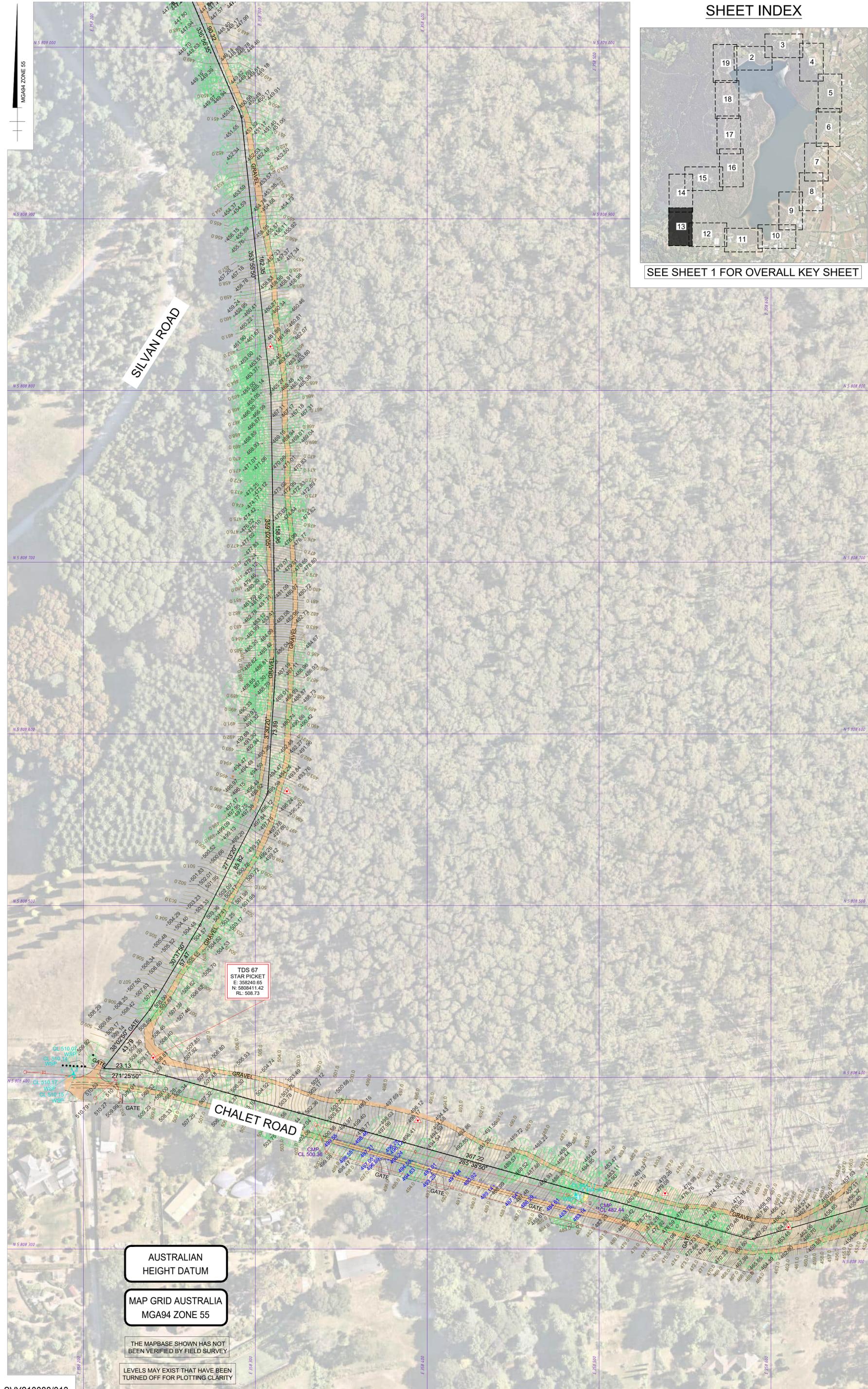
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SEE SHEET 012

Notations	Date	Signed	Drawn
Date of survey - 04/11/2022	10/11/2022	Signed	SSM
Co-ordinate datum is MGA94 Zone 55 wide Melbourne GNSS observations	04/11/2022	Signed	Surveyed
Level datum is Vide Best Fit To PM000(RL000.000) and DVA 00000(RL000.000)	22/11/2022	Signed	Checked
Grid interval is 100m	22/11/2022	Signed	PNK
Contour interval - 0.2m	22/11/2022	Signed	Approved
Melway reference - 122D9	22/11/2022	Signed	PNK



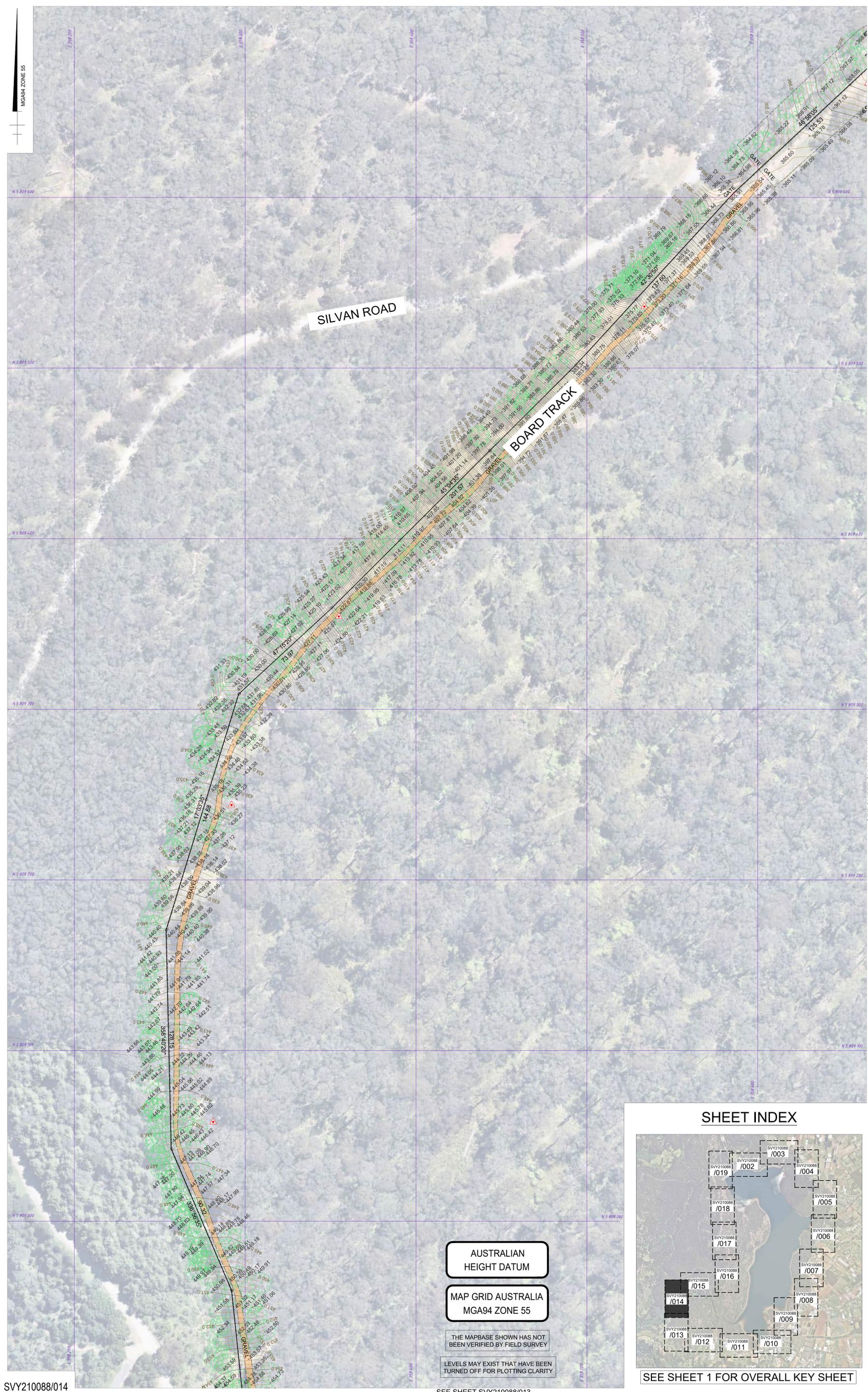
TDS 67
STAR PICKET
E: 358240.65
N: 5808411.42
RL: 508.73

AUSTRALIAN
HEIGHT DATUM

MAP GRID AUSTRALIA
MGA94 ZONE 55

THE MAPBASE SHOWN HAS NOT
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LEVELS MAY EXIST THAT HAVE BEEN
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SVY210088/014

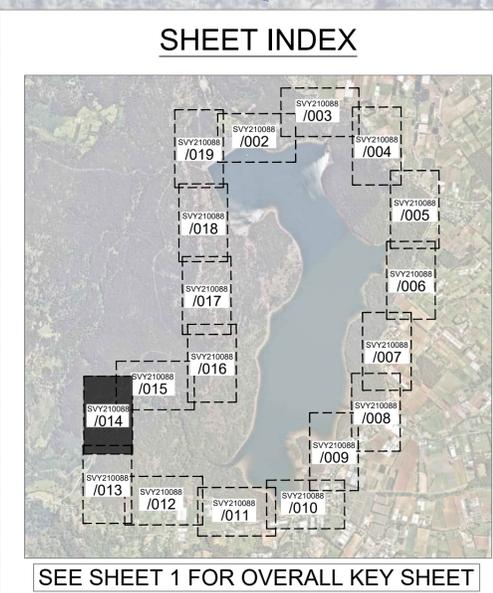
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AUSTRALIAN
HEIGHT DATUM

MAP GRID AUSTRALIA
MGA94 ZONE 55

THE MAPBASE SHOWN HAS NOT
BEEN VERIFIED BY FIELD SURVEY

LEVELS MAY EXIST THAT HAVE BEEN
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SEE SHEET 1 FOR OVERALL KEY SHEET

SEE SHEET SVY210088/015

Tailors reference	S20303-S210-D014
Scale	1:1000
Sheet size	A1
MWC plan number	SVY210088/014
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Plan title

**FEATURE AND LEVEL
SURVEY PLAN
SHEET 014 of 019**

Project

**SILVAN RESERVOIR
VIC 3795**
File Ref: SVY210088

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Water**
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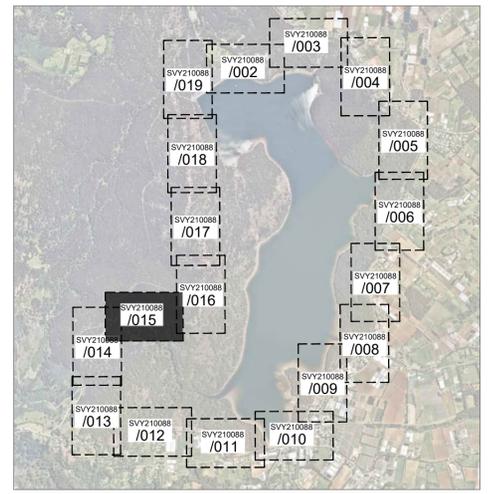
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Drawn	SRH	Grid interval is 100m	Contour interval - 0.2m
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Approved	PNK		
Rev	Date	By	Ckd/ App

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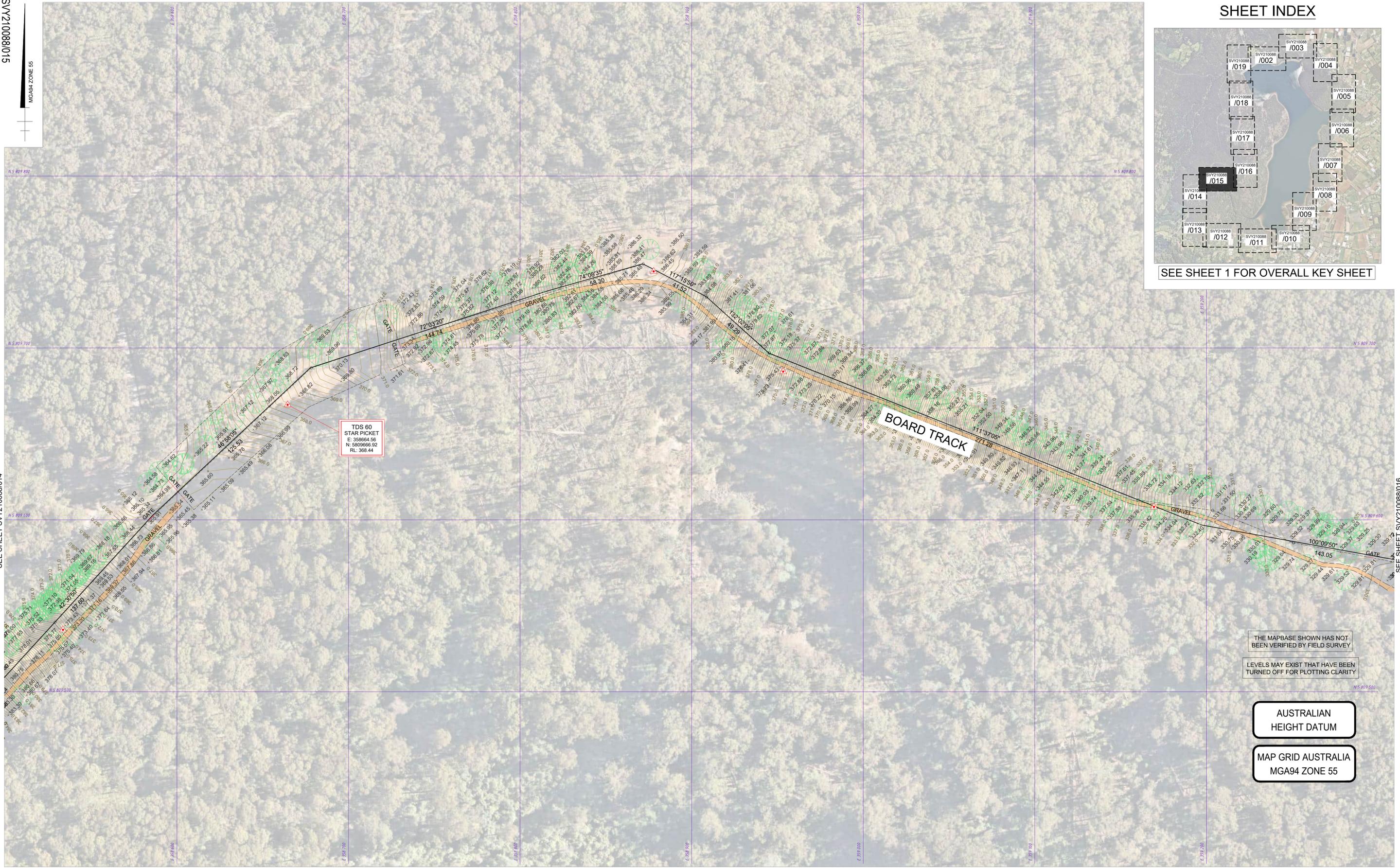
SVY210088/015



SHEET INDEX



SEE SHEET 1 FOR OVERALL KEY SHEET



TDS 60
STAR PICKET
E: 358664.56
N: 5809666.92
RL: 368.44

BOARD TRACK

THE MAPBASE SHOWN HAS NOT BEEN VERIFIED BY FIELD SURVEY

LEVELS MAY EXIST THAT HAVE BEEN TURNED OFF FOR PLOTTING CLARITY

AUSTRALIAN HEIGHT DATUM

MAP GRID AUSTRALIA
MGA94 ZONE 55

SEE SHEET SVY210088/014

SEE SHEET SVY210088/016

Rev	Date	Details	By	Ckd	App

Drawn	Signed	Date
SSM	[Signature]	10/11/2022
Surveyed	[Signature]	04/11/2022
Checked	[Signature]	22/11/2022
Approved	[Signature]	22/11/2022

Notations
Date of survey - 04/11/2022
Co-ordinate datum is MGA94 Zone 55 wide MelbPOS GNSS observations
Level datum is Vide Best Fit To MONBULK PM68 (RL248.733 and WANDIN YALLOCK PM160 (RL286.063)
Grid interval is 100m
Contour Interval : 0.2m
Melway reference - 122F6

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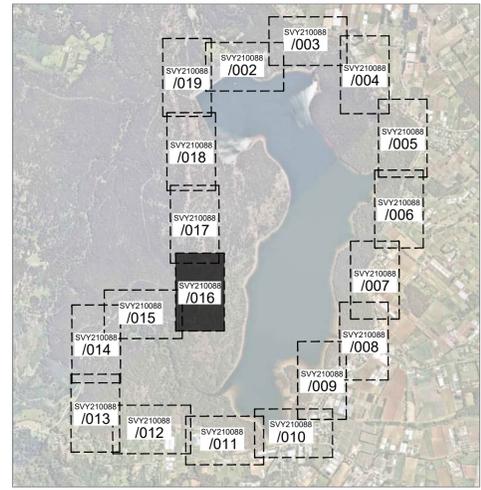
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990 La Trobe Street, Docklands 3008

Project
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VIC 3795
File Ref: SVY210088

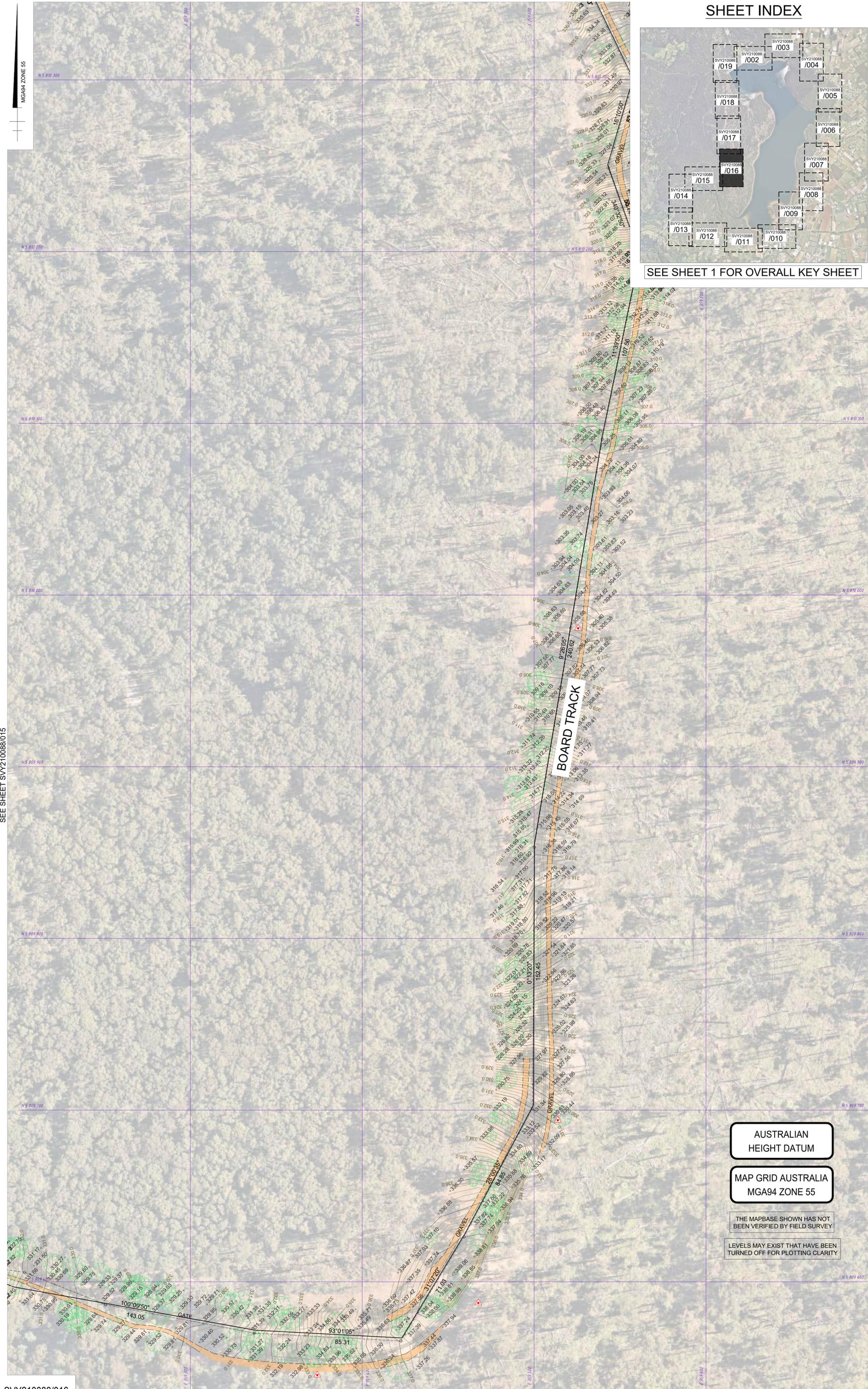
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FEATURE AND LEVEL SURVEY PLAN
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Scale	A1
MWC plan number	Rev
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SVY210088/016

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FEATURE AND LEVEL SURVEY PLAN SHEET 016 of 019

Plan title

SILVAN RESERVOIR VIC 3795
File Ref: SVY210088

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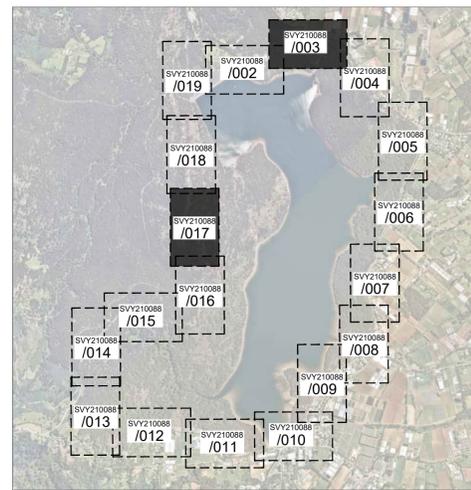
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Checked	PNK	Contour interval - 0.2m	
Approved	PNK	Melway reference - 122G5	
Rev	Date	By	Ckd / App

AUSTRALIAN HEIGHT DATUM

MAP GRID AUSTRALIA MGA94 ZONE 55

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FEATURE AND LEVEL SURVEY PLAN SHEET 017 of 019			
Plan title			
SILVAN RESERVOIR VIC 3795 File Ref: SVY210088			
Project			
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 Urban Development Built Environments Infrastructure T: 61 3 9501 2800 E: tds@taylors.com.au W: taylors.com.au Taylors Development Strategists - ABN 48 042 392 373			
Notations Date of survey - 04/11/2022 Co-ordinate datum is MGA94 Zone 55 wide Melbourne GNSS observations Level datum is Vide Best Fit to MONBULK PM68 (RL248.733) and WANDIN YALLOCK PM160 (RL286.063) Grid interval is 100m Contour interval - 0.2m Metway reference - 122G4			
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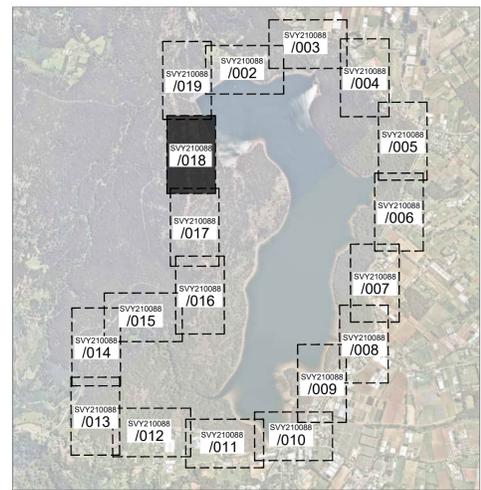
AUSTRALIAN HEIGHT DATUM

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LEVELS MAY EXIST THAT HAVE BEEN TURNED OFF FOR PLOTTING CLARITY

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SEE SHEET 1 FOR OVERALL KEY SHEET

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Rev	A

FEATURE AND LEVEL
SURVEY PLAN
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Plan title
SILVAN RESERVOIR
VIC 3795
File Ref: SVY210088

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Notations	Date of survey - 04/11/2022
	Co-ordinate datum is MGA94 Zone 55 wide MelbPOS GNSS observations
	Level datum is Tide Best Fit to MONBULK PM68 (RL248.733) and WANDIN YALLOCK PM160 (RL286.063)
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	22/11/2022	Signed	
	22/11/2022	Signed	

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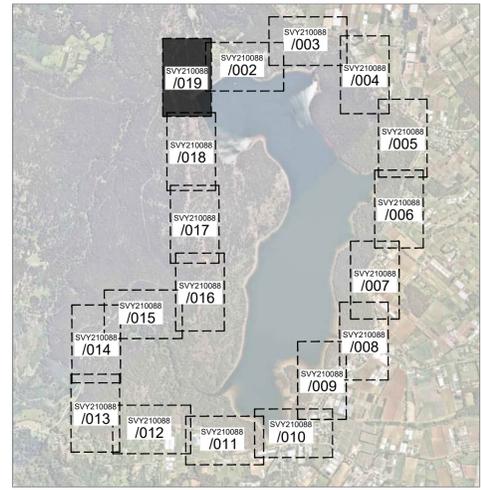
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MAP GRID AUSTRALIA MGA94 ZONE 55

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LEVELS MAY EXIST THAT HAVE BEEN TURNED OFF FOR PLOTTING CLARITY

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SEE SHEET 1 FOR OVERALL KEY SHEET

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Rev	A

FEATURE AND LEVEL SURVEY PLAN SHEET 019 of 019

Plan title

SILVAN RESERVOIR
VIC 3795
File Ref: SVY210088

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SEE SHEET SVY210088/002

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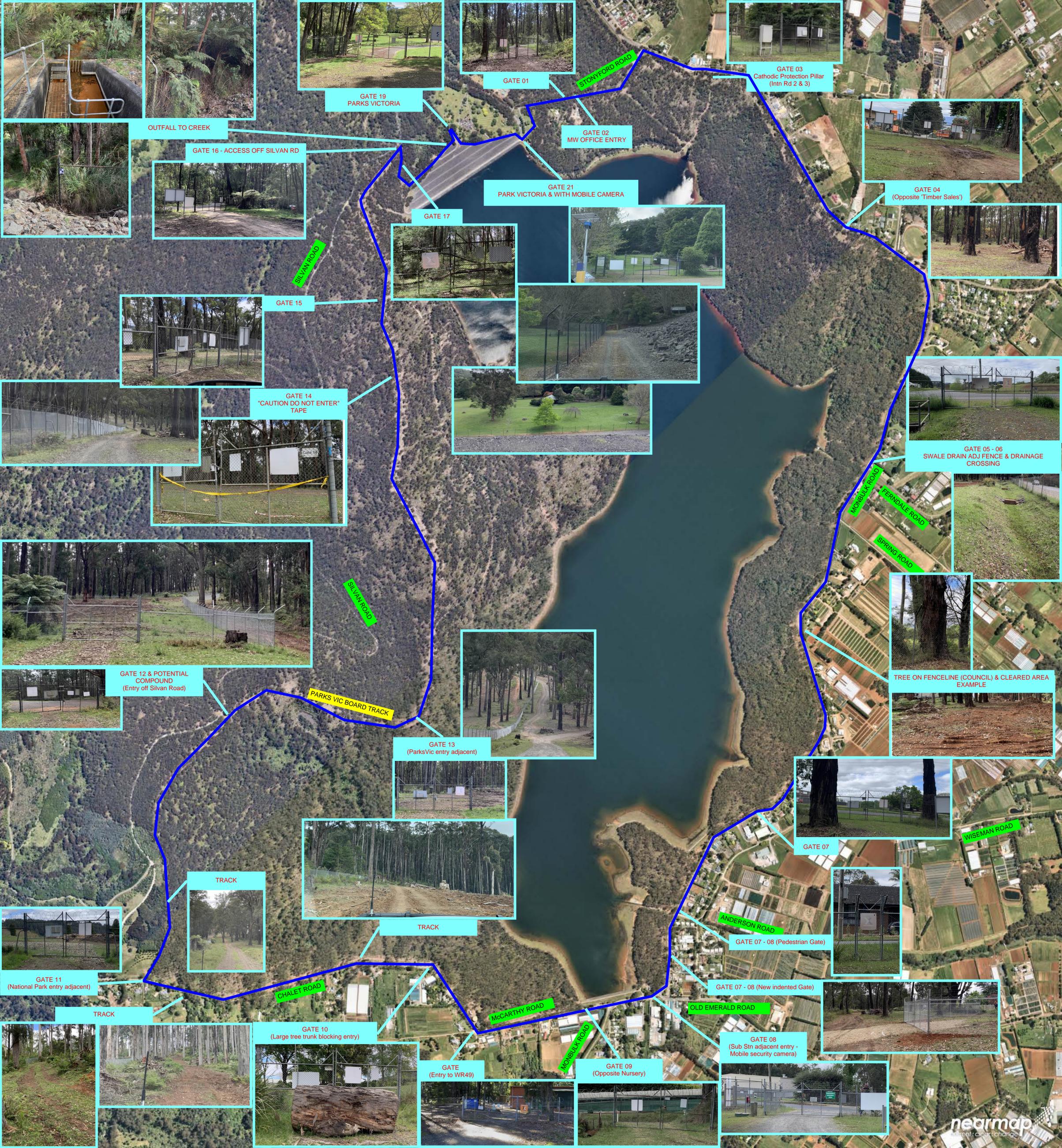


AUSTRALIAN HEIGHT DATUM
MAP GRID AUSTRALIA
MGA94 ZONE 55

SILVAN RESERVOIR

THE MAPBASE SHOWN HAS NOT BEEN VERIFIED BY FIELD SURVEY
LEVELS MAY EXIST THAT HAVE BEEN TURNED OFF FOR PLOTTING CLARITY

Appendix B. Project Alignment with Gate Locations



OUTFALL TO CREEK

GATE 16 - ACCESS OFF SILVAN RD

GATE 19
PARKS VICTORIA

GATE 01

STONYFORD ROAD

GATE 03
Cathodic Protection Pillar
(Intrn Rd 2 & 3)

GATE 02
MW OFFICE ENTRY

GATE 21
PARK VICTORIA & WITH MOBILE CAMERA

GATE 04
(Opposite 'Timber Sales')

GATE 17

GATE 15

GATE 14
"CAUTION DO NOT ENTER"
TAPE

GATE 05 - 06
SWALE DRAIN ADJ FENCE & DRAINAGE
CROSSING

GATE 12 & POTENTIAL
COMPOUND
(Entry off Silvan Road)

PARKS VIC BOARD TRACK

GATE 13
(ParksVic entry adjacent)

TREE ON FENCELINE (COUNCIL) & CLEARED AREA
EXAMPLE

TRACK

TRACK

GATE 07

GATE 07 - 08 (Pedestrian Gate)

WISEMAN ROAD

GATE 07 - 08 (New indented Gate)

OLD EMERALD ROAD

GATE 08
(Sub Stn adjacent entry -
Mobile security camera)

GATE 10
(Large tree trunk blocking entry)

GATE
(Entry to WR49)

GATE 09
(Opposite Nursery)

CHALET ROAD

MCCARTHY ROAD

MONIBULK ROAD

Geotechnical Desktop Assessment

Table C-1. VVG Borehole Stratigraphy Summary (Lotsearch)

Borehole ID	Year	Drillers Log	Approximate Distance from Fence Alignment (m)
79928	1975	0.00m-1.00m TOPSOIL 1.00m-10.00m CLAY 10.00m-15.14m CLAY & STONE 15.14m-22.00m SILT STONE 22.00m-23.00m MUDSTONE GREY 23.00m-24.00m BROKEN MUDSTONE 24.00m-44.00m MUDSTONE HARD (DRILL DROPS)	<20
98394	1974	0.00m-1.00m TOPSOIL 1.00m-17.00m CLAY	<20
98393	1974	0.00m-9.00m CLAY DECOM STONE 9.00m-20.00m CLAY	<20
WRK048541	1985	0.00m-1.22m SURFACE SOIL 1.22m-6.10m RED CLAY 6.10m-27.43m MOTTLED CLAYS	<20
79928	1975	0.00m-1.00m TOPSOIL 1.00m-10.00m CLAY 10.00m-15.14m CLAY & STONE 15.14m-22.00m SILT STONE 22.00m-23.00m MUDSTONE GREY 23.00m-24.00m BROKEN MUDSTONE 24.00m-44.00m MUDSTONE HARD (DRILL DROPS)	<50
98394	1974	0.00m-1.00m TOPSOIL 1.00m-17.00m CLAY 17.00m-22.00m CLAY STONE (NOT HARD) 22.00m-31.00m NO SAMPLES 31.00m-36.00m BASALT CLAY BANDS 36.00m-40.00m BROKEN BASALT 40.00m-47.00m BASALT SOME BROKEN PARTS 47.00m-53.00m SOLID BLUE BASALT 53.00m-54.00m CAVITY 54.00m-60.00m BROKEN BASALT 60.00m-66.00m SOLID BASALT 66.00m-72.00m BASALT BLUE 72.00m-74.00m DECOM BASALT BROKEN 74.00m-85.50m BASALT BLUE 85.50m-86.00m BEDROCK MUDSTONE SAND ON TOP	<50
WRK048621	1989	0.00m-2.00m TOPSOIL 2.00m-43.00m MOTTLED CLAY	50
WRK048600	1985	0.00m-15.00m RED BASALTIC CLAY	50
WRK043263	2004	0.00m-2.00m SOIL & CLAY 2.00m-29.00m WEATHERED BASALT	70
WRK048611	1985	0.00m-18.00m YELLOW STIPLED CLAYS	90
104877	1979	0.00m-18.29m MOTTLED CLAY	120
WRK048553	1977	0.00m-0.20m TOPSOIL 0.20m-1.50m VERY FIRM RED CLAY 1.50m-9.00m VERY FIRM PINK CLAY 9.00m-15.50m MEDIUM FIRM MOTTLED CLAY	180
WRK042926	1992	0.00m-1.00m TOPSOIL & CLAY 1.00m-6.00m SUBSOIL 6.00m-18.00m CLAY	180
98611	1972	0.00m-0.91m SURFACE SOIL 0.91m-45.72m MOTTLED CLAYS	200
98408	1976	0.00m-1.00m TOPSOIL 1.00m-38.00m WEATHERED BASALT CLAY VARIOUS COLOURS 38.00m-38.10m STONE BAR 38.10m-44.00m STONE AND CLAY 44.00m-47.00m BASALT (WATER)	300

Geotechnical Desktop Assessment

Borehole ID	Year	Drillers Log	Approximate Distance from Fence Alignment (m)
		47.00m-51.00m BASALT 51.00m-61.00m VERY HARD BLUE BASALT 61.00m-65.00m VERY HARD BASALT 65.00m-72.00m HARD BLUE BASALT 72.00m-75.00m BASALT SOME CRYSTALS NOT AS HARD 75.00m-77.00m BLUE BASALT 77.00m-80.00m BASALT BLUE 80.00m-86.00m BASALT CRACKED 86.00m-87.00m MUDSTONE	
127736	1995	0.00m-10.50m CLAY RED/BROWN 10.50m-16.00m CLAY RED 16.00m-26.60m CLAY LIGHT BROWN (DAMP)	330
WRK048599	1985	0.00m-0.60m RED TOPSOIL 0.60m-3.60m RED CLAY 3.60m-24.40m GREY/BROWN BASALT CLAY	370
WRK967939	2006	0.00m-1.00m SOIL 1.00m-33.00m MOTTLED SANDY CLAY	400
WRK092983	2016	0.00m-7.00m Topsoil 7.00m-15.00m CLAY	400

Table 6-1. Jacobs Investigation Borehole Stratigraphy Summary

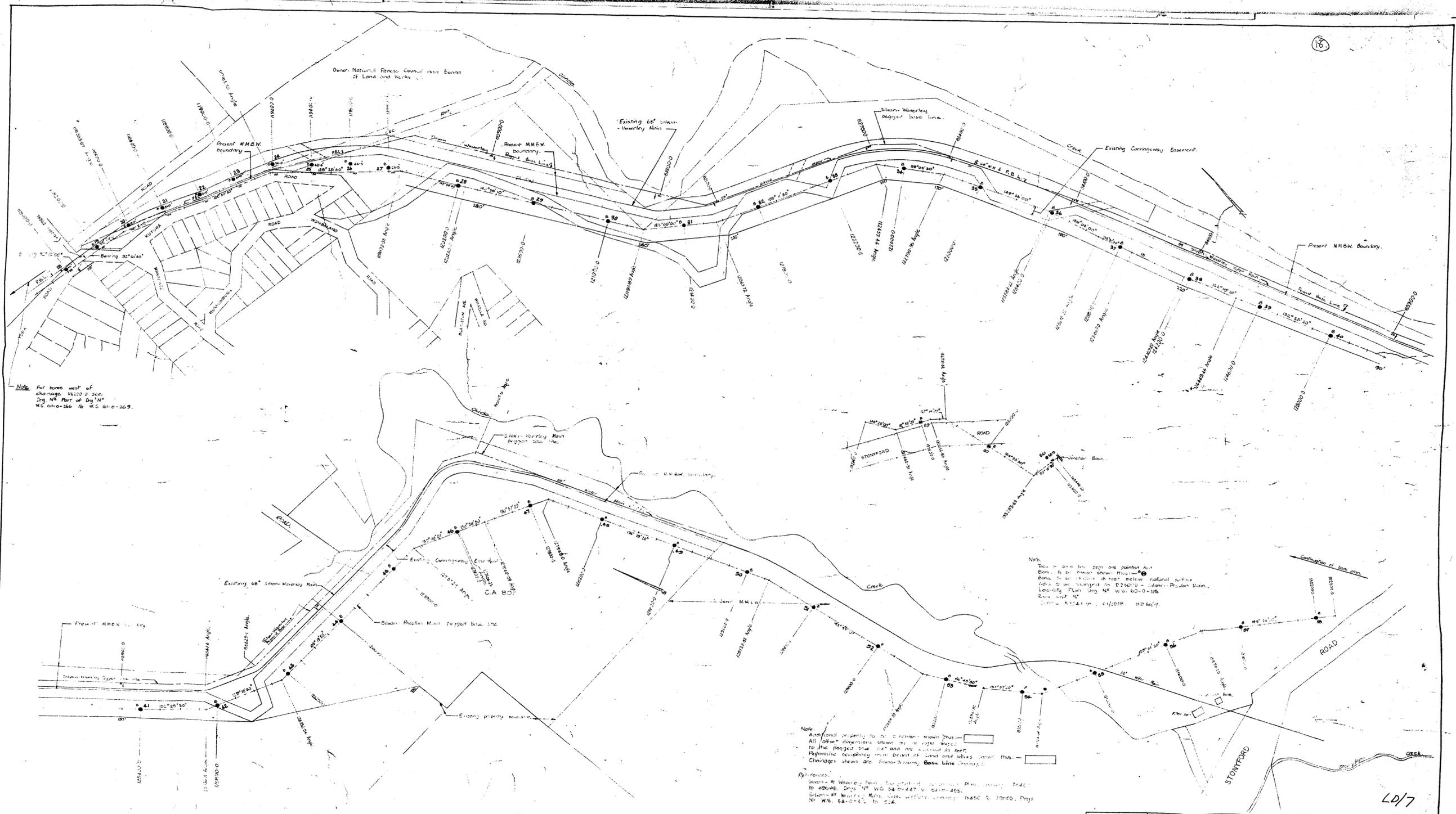
Borehole ID	Year	Drillers Log	Approximate Distance from Fence Alignment (m)
BH03	2019	0.00m-0.20m Topsoil 0.20m-3.45m SILTY CLAY: high plasticity, dark orange brown, trace fine rounded extremely weathered gravel (red)	150
BH04	2019	0.00m-0.20m SOIL 0.20m-2.50 Clayey SILT: high plasticity red/brown with traces of roots and black organic silt 2.50m-2.95m Silty CLAY: medium plasticity, red/grey, trace fine gravel	120
BH31	2019	0.00m-1.00m Topsoil: CLAY, dark brown/red, medium plasticity, trace gravel	60
BH32	2019	0.00m-0.20m Topsoil 0.20m-2.95 CLAY: high plasticity red/brown	130
BH37	2019	0.00m-0.40m FILL: Sandy gravel 0.40m-2.00 Silty CLAY: low plasticity red/brown 2.00m-2.95 Extremely weathered rock EWR: recovered as clayey silt, low plasticity	100

C.2 Melbourne Water Archive Boreholes

Melbourne Water archival boreholes from data sets LD-007, LD-014, LD-080 and LD-101 (north boreholes) and LD-015 (south boreholes) are included within this appendix, with their general locations shown in Figure C-2.



Figure C-2 Melbourne Water archive borehole locations



Note: For bore west of change 18220.0 sec. Drg. No. 104 of Dg. No. 102, 103 & 104 to 105.

Note: This is a 1:1 scale plan and points are shown to the nearest whole number. The bore is shown at the top of the plan. The bore is shown at the top of the plan. The bore is shown at the top of the plan.

Note: Additional property to be shown shown thus: [] All other dimensions shown as in plan. Repressive occupancy near bore of land and works shown thus: [] Changes shown are shown shown. Base Line shown as []

References: Drg. No. 104 of Dg. No. 102, 103 & 104 to 105. Silvan Waterway Main, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

MELBOURNE AND METROPOLITAN BOARD OF WORKS			
Designed	R.H.E.	Checked	J.P.K.
Senior Designing Engineer		Examined	J.P.K.
Chief Investigating and Designing Engineer		Revised	
SILVAN PRESTON MAIN			DRG. NO. W.S.
AND LOCATION OF BORE			82-0-130
SCALE			

M.M.B.W. - CONSTRUCTION DIVISION
GROUND INVESTIGATION

16

File No. _____

List No. L.D. 17

LOG OF BORES

Sheet No. 14 of 15

Bore No.	Position	Depth from Surface	Material		Remarks
			Type	Other Description	
57	131.800.0. ft ON-PEGGED BASE-LINE.	0-13'	CLAY	RED	STIFF.
58	132.200.0. ft ON-PEGGED BASE-LINE.	0-13'	CLAY	RED	STIFF.
59	132.600.0. ft ON-PEGGED BASE-LINE.	0-13'	CLAY	RED	STIFF.

Log compiled by [Signature] Date 2-10-62

Checked [Signature] Inspector, Ground Investigation. Date 10-10-62

M.M.B.W. - CONSTRUCTION DIVISION
GROUND INVESTIGATION

(17)

File No. _____

List No. L.D./7

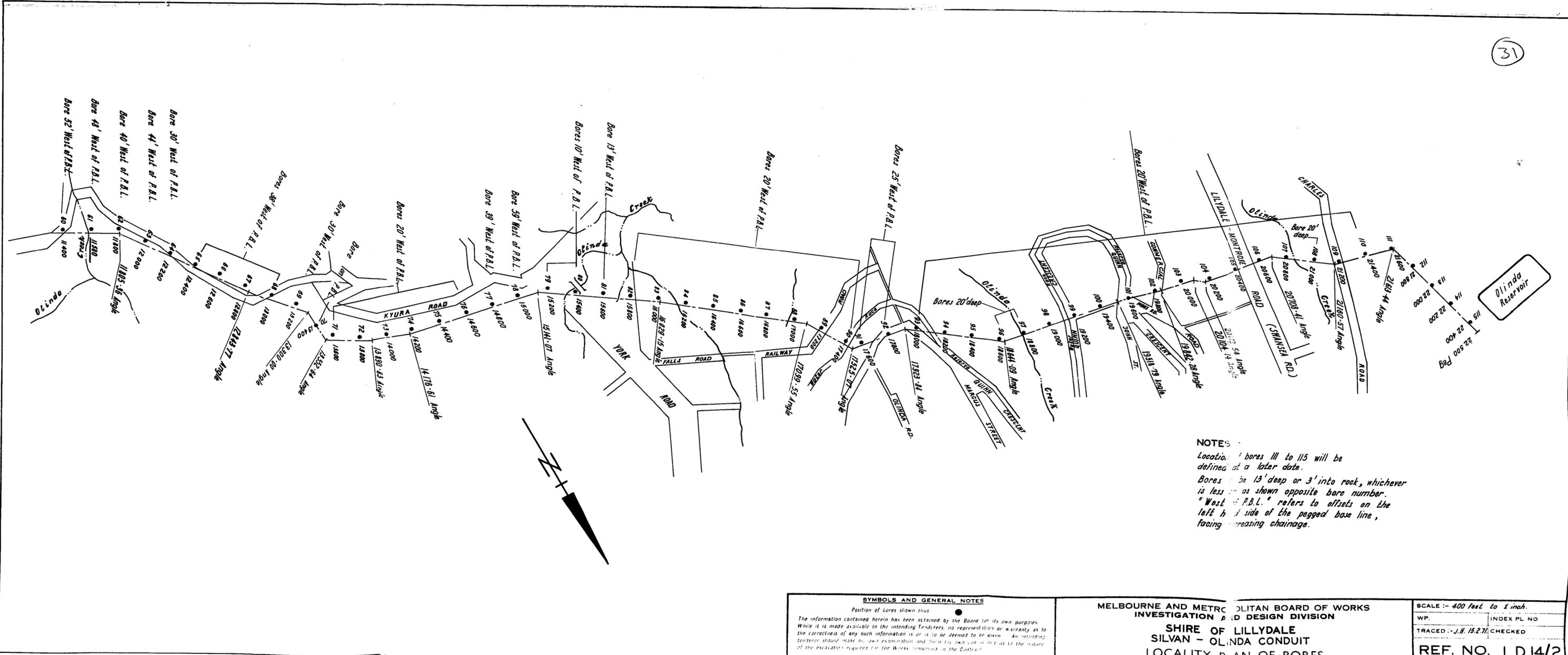
LOG OF BORES

Sheet No. 15 of 16

Bore No.	Position	Depth from Surface	Material		Remarks
			Type	Other Description	
60	133.000.0 ft ON. PEGGED BASE LINE	0-13'	CLAY	RED	STIFF
61	133.400.0 ft 36 ft. NTH. OF PEGGED BASE LINE LINE	0-13'	CLAY	RED	STIFF

Log compiled by [Signature] Date 2-10-62

Checked [Signature] Inspector, Ground Investigation. Date 10-10-62

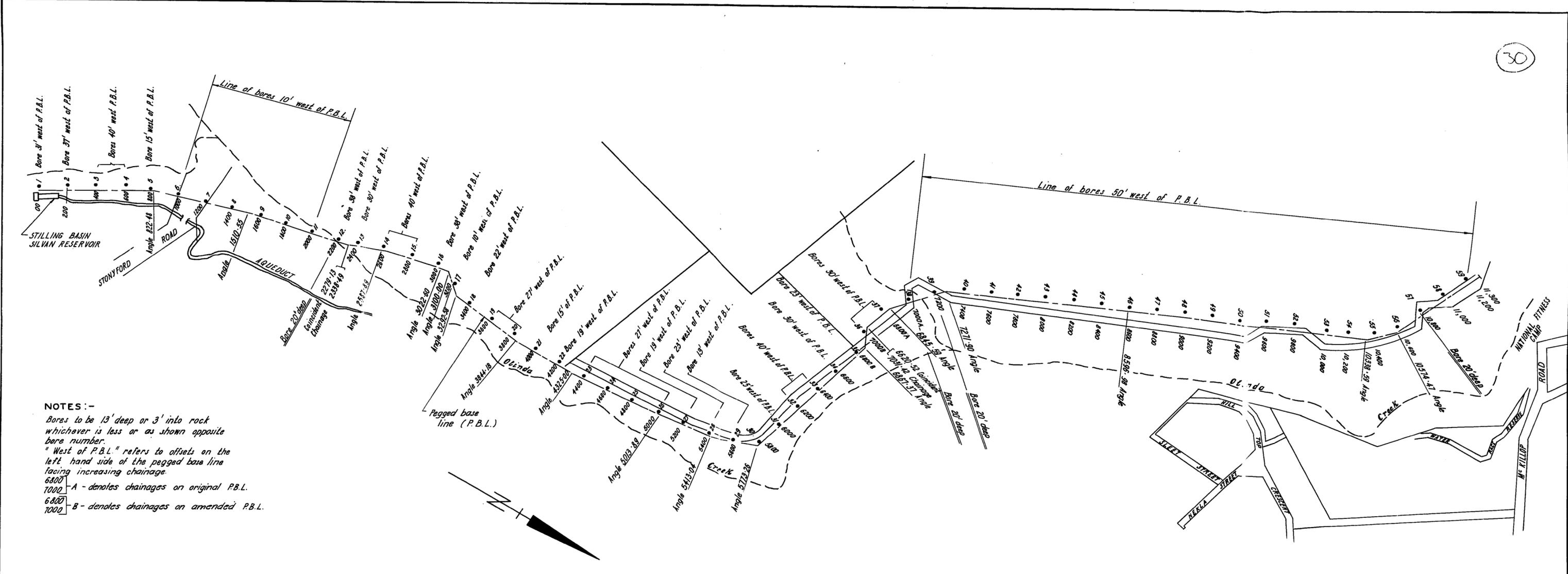


NOTES -
 Location of bores 111 to 115 will be defined at a later date.
 Bores to be 13' deep or 3' into rock, whichever is less as shown opposite bore number.
 "West of P.B.L." refers to offsets on the left hand side of the pegged base line, facing increasing chainage.

SYMBOLS AND GENERAL NOTES
 Position of bores shown thus ●
 The information contained herein has been obtained by the Board for its own purposes. While it is made available to the intending Tenderers, no representation or warranty as to the correctness of any such information is or is to be given. An intending tenderer should make his own examination and search the same and be responsible as to the nature of the excavation required in the Works comprised in the Contract.

MELBOURNE AND METROPOLITAN BOARD OF WORKS
 INVESTIGATION AND DESIGN DIVISION
 SHIRE OF LILLYDALE
 SILVAN - OLINDA CONDUIT
 LOCALITY PLAN OF BORES

SCALE :- 400 feet to 1 inch.
 WP. INDEX PL. NO.
 TRACED :- J.H. 15.2.77. CHECKED
 REF. NO. LD 14/2



NOTES:-
 Bores to be 13' deep or 3' into rock whichever is less or as shown opposite bore number.
 "West of P.B.L." refers to offsets on the left hand side of the pegged base line facing increasing chainage.
 6800
 7000 A - denotes chainages on original P.B.L.
 6800
 7000 B - denotes chainages on amended P.B.L.

SYMBOLS AND GENERAL NOTES
 Position of bores shown thus ●
 The information contained herein has been obtained by the Board for its own purposes. While it is made available to the intending Tenderers, no representation or warranty, as to the correctness of any such information is or is to be deemed to be given. An intending Tenderer should make his own examination and form his own conclusions as to the nature of the excavations required for the Works comprised in the Contract.

MELBOURNE AND METROPOLITAN BOARD OF WORKS
 INVESTIGATION AND DESIGN DIVISION
 SHIRE OF LILLYDALE
 SILVAN - OLINDA CONDUIT
 LOCALITY PLAN OF BORES

SCALE:- 400 FEET TO INCH
 WP. INDEX PL. NO.
 TRACED J.M. CHECKED
 REF. NO. LD14/1

M.M.B.W. - CONSTRUCTION DIVISION
GROUND INVESTIGATION

3

File No.

List No. LD 14/1

LOG OF BORES

Sheet No. 1 of 12

Municipality SYLVAN. Drawing No. D 116000

Project SYLVAN - OLINDA CONDUIT.

Driller B. TORBY Drilling Machine VICTOR

Core/Auger Dia. 1 1/2 in. Commenced 27-1-71 Completed 9-2-71.

The description of materials is in accordance with the "Classification of Rock and Soil Types, for use by Drillers" and the "Definitions of Terms for Rock and Soil Types", issued by direction of the Engineer in Chief, 17-5-60.

Bore No.	Position	Depth from Surface	Material		Remarks
			Type	Other Description	
1	00. AS. 9d. PLAN.	0-13'	STONY CLAY	REFILL, BROWN	FIRM
2	200'	0-13'	CLAY	BROWN	FIRM
3	400'	0-13'	CLAY	BROWN AND RED	FIRM.
4	600'	0-5'	CLAY	BROWN AND RED	FIRM
		5'-8'	SANDSTONE	YELLOW	MEDIUM
		8'-13'	SANDSTONE	YELLOW	HARD
ALL BORES ARE DRY					

Log compiled by [Signature] DATE Date 27-1-71

Checked [Signature] Inspector, Ground Investigation. Date 11-2-71

M.M.B.W. - CONSTRUCTION DIVISION
GROUND INVESTIGATION

(4)

File No.

List No. L.D. 14/1

Sheet No. 2 of 12

LOG OF BORES

Bore No.	Position	Depth from Surface	Material		Remarks
			Type	Other Description	
5	800'	0-13'	CLAY	Brown	FIRM
	AS ON PLAN.				
6	1000'	0-1'	SOIL	Brown	
		1-4'	CLAY	Brown	FIRM
		4-13'	STONY CLAY	Brown	FIRM
7	1200'	0-8'	CLAY	Brown	FIRM
		8-13'	GRAVELLY CLAY	Brown	FIRM
8	1400'	0-1'	SOIL	Brown	
		1-5'	CLAY	Brown	FIRM
		5-9'	STONY CLAY	Brown	FIRM
		9-13'	SANDSTONE	LIGHT BROWN	MEDIUM
9	1600'	0-3'	CLAY	Brown	FIRM
		3-5'	STONY CLAY	Brown	FIRM
		5-13'	SANDSTONE	LIGHT BROWN	HARD
			ALL BORES ARE DRY		

Log compiled by

[Signature]

[Signature]

Date 27-1-71

Checked

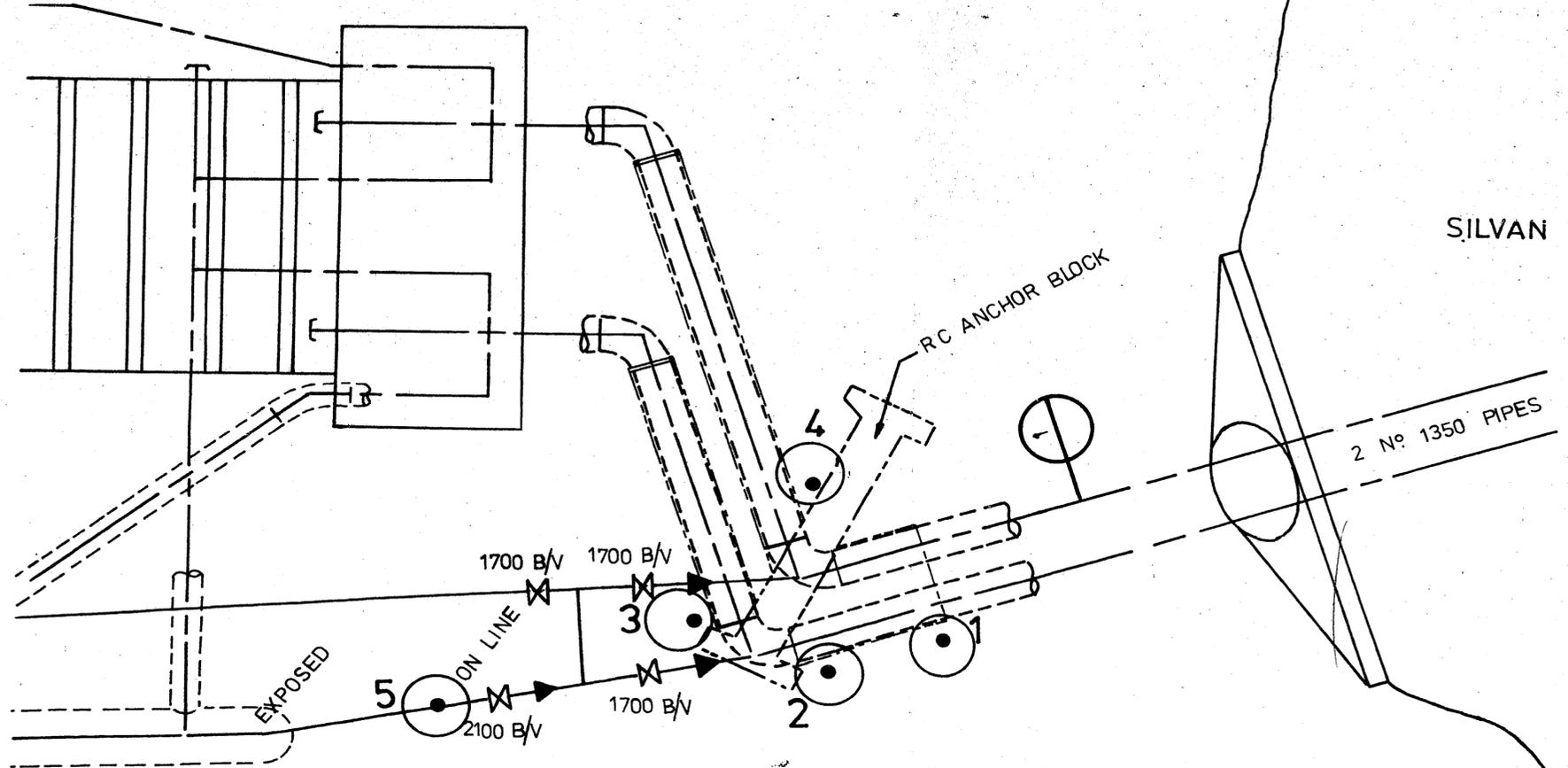
[Signature]

Inspector, Ground Investigation

Date 11-2-71

Form No. Con. 70

CARETAKER



SILVAN RESERVOIR EMBANKMENT

2 No. 1350 PIPES

SILVAN OUTLET WORKS

NOT TO SCALE

LD / 80

Δ
3

Δ

10

Δ
4

MICROBOX



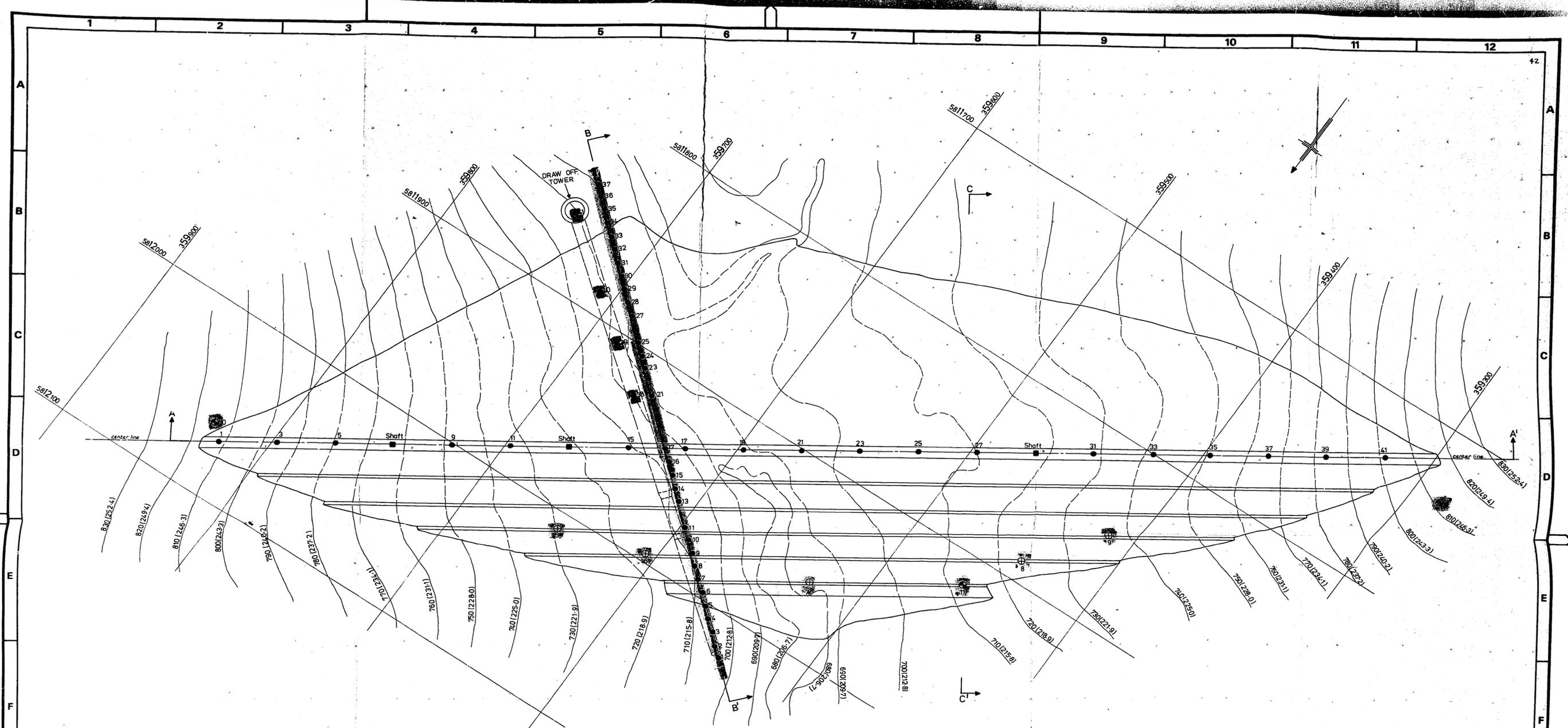
10

5

Δ
4

1983

Δ
3



LOCALITY PLAN

LEGEND

- Boreholes 10 to 12
- ⊕ Augerholes 5 to 9
- Boreholes } Investigation information
- Shafts } prior to dam construction, June 1923, 1926.

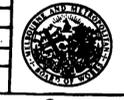
LIST NO. LD/101 Boreholes

E			
D			
C			
B			
A			
INDEX	DATE	REVISION	APPD
1			
2			
3			

NOTES
 1/ The dam layout shown has been taken from a Water Supply Design drawing currently under revision. The shape of the downstream bars and the location of features along the dam centerline may need to be adjusted by distances of up to 4m.
 2/ Augerholes 5 to 9 not used for assessment of dam foundation geology.

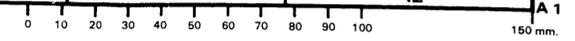
P. N. Hunter
 SUPERINTENDING
 CHIEF GEOLOGIST

DRAWN	R. B. Anderson	March 83
TRACED	D. Vercoe	Mar-83
CHECKED	R. B. A.	April 83
APPROVED	<i>[Signature]</i>	April 83
JOB No.	49243	
REPORT No.		



MELBOURNE AND METROPOLITAN BOARD OF WORKS
 SCIENTIFIC SERVICES DEPARTMENT ENGINEERING GEOLOGY SECTION
 SILVAN RESERVOIR
 ADDITIONAL GEOLOGICAL INFORMATION

FIG. 1
 SCALE 1:1000
 DRAWING No.
 G-WD33-100
 SHEET 1 OF 3



MICROBOX

1983

M.M.B.W.

No 12848

DRILLER'S REPORT (FOR SHIFT 25/02/93)

PROJECT SILVAN Res. DAM SURVEILLANCE

LOCATION SILVAN

HOLE No. 12
LIST No. LD/101

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	9 ⁰⁰	NIL	NIL	NIL	
END OF SHIFT	4 ⁰⁰	3.50	3.20 ^m	DAY	
DRILLING METHODS SIZE & DEPTH	ROTARY NMLC			DRILLING FLUID WATER	

DRILLING PROGRESS each run or operation to be listed.					
DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
0.0	0.50 ^m	UID. SAMPLE	0.50	NIL	CLAY BROWN MOIST SLFF.
0.50	1.50 ^m	CORING	0.80	NIL	CLAY BROWN MOIST SLFF WITH EVIDENCE OF SILTSTONE.
1.50	1.80	CORING	0.30	NIL	SILTSTONE DP 2-3 F grey BROWN WRAK. F.SP. N.E.
1.80	3.00 ^m	CORING	1.20	NIL	SILTSTONE 70% CLAY 30% DP. 2-3 F grey BROWN WRAK F.SP. N.E.

BORE HOLE COMPLETION DETAILS				TOTAL DEPTH.....	
DRILLING CREW	NAME	START	FINISH	HOURS	
DRILLER	G. De THOMASIS	7 ⁰⁰	5 ¹⁵	9 3/4	
HELPER	G. VENTILLE	7 ¹⁵	5 ¹⁵	8 + 60	

PLANT RETURN: JOB No. 49243					DIAMOND TOOLS RETURN			
ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	246/985	4	4	NW	BIT	28101	1.50	FAIR
PUMP	35/2108	4	4	NW	R/SHELL	7746/4	150 ^m	FAIR
VEHICLE TRAILER	4714	3			C/SHOE	8088/6	± 3.0 ^m	good
VEHICLE	3655	1						

NOTE ANY REMARKS OR DELAYS:

placed piezometer in bore 10 pulled out 25.50^m
of H.W casing grouted bore moved to bore 12

G. De Thomasis 25/02/93 DATE
DRILLER DATE
INSPECTOR DATE
GEOLOGIST DATE

M.M.B.W.

No 12849

DRILLER'S REPORT (FOR SHIFT 28/02/83)PROJECT SILVAN Res. DAM SURVEILLANCELOCATION SILVAN

HOLE No. 12

LIST No. LD/101

	TIME	HOLE DEPTH	CASING DEPT	WATER LEVEL	WATER STRUCK
START OF SHIFT	8 ⁰⁰	3.00	3.00	Dry	
END OF SHIFT	4 ⁰⁰	13.50	6.00	7.00	
DRILLING METHODS SIZE & DEPTH	ROTARY N.M.L.C.				DRILLING FLUID WATER

DRILLING PROGRESS each run or operation to be listed.

DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
3.00	4.50	CORING	1.50	nil	siltstone DP. 2-3F Brown weak F.S.P. 10-200mm
4.50	6.00	CORING	1.35	nil	siltstone 50% clay 50% DP. 2F gray brown weak F.S.P. N.E.
6.00	7.50	CORING	1.50	nil	siltstone DP. 2F gray brown weak F.S.P. 30-140mm
7.50	9.00	CORING	1.50	nil	siltstone 50% clay 50% DP. 2F gray brown weak F.S.P. N.E.
9.00	10.50	CORING	1.50	nil	siltstone 50% clay 50% DP. 2F brown weak F.S.P. N.E.
10.50	12.00	CORING	1.40	nil	siltstone DP. 3F gray brown weak F.S.P. 10-150mm
12.00	13.50	CORING	1.50	nil	siltstone DP. 3F gray brown Med. F.S.P. 10-240mm

BORE HOLE COMPLETION DETAILS

TOTAL DEPTH.....

DRILLING CREW	NAME	START	FINISH	HOURS
DRILLER	G. De THOMASIS	7 ⁰⁰	5 ¹⁵	9 ³⁴
HELPER	G. VENVILLE	7 ¹⁵	5 ¹⁵	8 ⁴⁶ 0 min

PLANT RETURN: JOB No.

DIAMOND TOOLS RETURN

ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	12/6/985	7	1	NW	BIT	28101	10.50	FAIR
PUMP	352/108	7	1	NW	R/SHELL	7746/4	10.50	FAIR
VEHICLE TRAILER	4714	3	3		C/SHOE	8088/6	3m	good
VEHICLE	3655		8	NW				

NOTE ANY REMARKS OR DELAYS:

G. De Thomasis 28/02/83 DRILLER DATE
 Inspector DATE
 Geologist DATE

M.M.B.W.

DRILLER'S REPORT (FOR SHIFT 01/03/83)

No 12850

PROJECT SILVAN Res. DAM SURVEILLANCE

LOCATION SILVAN

HOLE No. 12

LIST No. LD/101

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	8 ⁰⁰	13.50 ^m	6 ^m	13.20	
END OF SHIFT	4.00	18.00 ^m	12.00 ^m	13.50 ^m	
DRILLING METHODS SIZE & DEPTH	ROTARY NMLC				DRILLING FLUID WATER

DRILLING PROGRESS each run or operation to be listed.

DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
13.50	14.10	CORING	0.60	NIL	Siltstone DP 2F grey brown WEAK F.S.P. N.E.
14.10	15.00	CORING	0.80	NIL	Siltstone DP 2F grey brown WEAK F.S.P. N.E.
15.00	16.50	CORING	1.50 ^m	NIL	Siltstone DP 2F grey brown WEAK F.S.P. N.E.
16.50	18.00	CORING	1.25 ^m	NIL	Siltstone 50% clay 50% DP 2F grey brown-WEAK F.S.P. N.E.

BORE HOLE COMPLETION DETAILS

DRILLING CREW		NAME	TOTAL DEPTH		
DRILLER	HELPER		START	FINISH	HOURS
		C. De THOMAS	7:15	5:15	9 1/2
		G. VENVILLE	7:15	5:15	8+60

PLANT RETURN: JOB No. 49243

ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	DIAMOND TOOLS RETURN			
					ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	126/985	5	3	NW	BIT	28101	4.50	FAIR
PUMP	382/108	7	1	NW	R/SHELL	7746/4	4.50	FAIR
VEHICLE	4714	3	3		C/SHOE	8088/6	6	good.
VEHICLE	3655		8					

NOTE ANY REMARKS OR DELAYS

did not start drilling till 12.30 PM as
packer Test were carried out

C. De Thomas 01/03/83 DATE
DRILLER INSPECTOR
11 70 3849 GEOLOGIST DATE

M.M.B.W.

No 13001

DRILLER'S REPORT (FOR SHIFT 02/03/83 (DATE))

PROJECT SILVAN ROS DAM SURVEILLANCE

LOCATION SILVAN

HOLE No. 12

LIST No. LD/101

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	8 ⁰⁰	18.00 ^m	12.00 ^m	DRY	
END OF SHIFT	4 ⁰⁰	22.50	18.00 ^m	12.00 ^m	
DRILLING METHODS SIZE & DEPTH	ROTARY NMLC.				DRILLING FLU'D WATER

DRILLING PROGRESS each run or operation to be listed.

DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
18.00	19.50 ^m	CORING	1.50	NIL	Siltstone DP2 grey brown WEAK. F.SP. 10 - 230mm.
19.50	20.10	CORING	0.60	NIL	Siltstone DP. 2F. grey brown WEAK F.SP. N.E.
20.10	21.00	CORING	0.90	NIL	Siltstone DP2F grey brown WEAK F.SP. 10 - 180mm
21.00	22.50	CORING	1.45 ^m	NIL	Siltstone DP3 grey brown WEAK. F.SP. 10 - 320mm

BORE HOLE COMPLETION DETAILS

TOTAL DEPTH

DRILLING CREW	NAME	START	FINISH	HOURS
DRILLER	G. De THOMASIS	7 ⁰⁰	5 ¹⁵	9 34
HELPER	G. VENVILLE	7 ¹⁵	5 ¹⁵	8 + 60

PLANT RETURN: JOB No. 49243

DIAMOND TOOLS RETURN

ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	126/985	5	3	NW	BIT	28101	4.50 ^m	FAIR
PUMP	3512/108	7	1	NW	R/SHELL	7746/4	4.50 ^m	FAIR
VEHICLE TRAILER	4714	3	3		C/SHOE	8088/6	6	good.
VEHICLE	3655		8	NW				

NOTE ANY REMARKS OR DELAYS:

LHA PRESSURE PACKER TEST CARRIED OUT 10AM TO 12.30 PM.

G. De Thomasis 02/03/83 DATE INSPECTOR DATE 11
 DRILLER GEOLOGIST DATE

M.M.B.V.

No 13004

DRILLER'S REPORT (FOR SHIFTS 07/03/83 (DATE))PROJECT SILVAN RES. DAM SURVEILLANCE
LOCATION SILVANHOLE No. 12
LIST No. LD/101

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	<u>8⁰⁰</u>	<u>31.50</u>	<u>24.00m</u>	<u>30.20</u>	
END OF SHIFT	<u>1⁰⁰</u>	<u>36.00m</u>	<u>24.00m</u>	<u>26.00m</u>	
DRILLING METHODS SIZE & DEPTH	<u>ROTARY</u> <u>NHLCI</u>				DRILLING FLUID <u>WATER</u>

DRILLING PROGRESS					
each run or operation to be listed.					
DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
<u>31.50</u>	<u>33.00</u>	<u>Coring</u>	<u>1.50</u>	<u>NIL</u>	<u>Siltstone DP3. grey HARD</u> <u>F.SP. 30 - 290mm</u>
<u>33.00</u>	<u>34.50</u>	<u>Coring</u>	<u>1.50</u>	<u>NIL</u>	<u>Siltstone DP4 grey very HARD</u> <u>F.SP. 30 - 308mm</u>
<u>34.50</u>	<u>35.50</u>	<u>Coring</u>	<u>1.00m</u>	<u>NIL</u>	<u>Siltstone DP4F grey very HARD</u> <u>F.SP. 20 - 150mm</u>
<u>35.50</u>	<u>36.00m</u>	<u>Coring</u>	<u>0.50</u>	<u>NIL</u>	<u>Siltstone DP4F grey very</u> <u>HARD F.SP. 10 - 100mm</u>

BORE HOLE COMPLETION DETAILS			TOTAL DEPTH.....		
DRILLING CREW	NAME	START	FINISH	HOURS	
DRILLER	<u>G. De THOMAS</u>	<u>7⁰⁰</u>	<u>5¹⁵</u>	<u>9³⁴</u>	
HELPER	<u>G. VENVILLE</u>	<u>7¹⁵</u>	<u>5¹⁵</u>	<u>8⁴⁰</u>	

PLANT RETURN: JOB No. <u>49243</u>					DIAMOND TOOLS RETURN			
ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	<u>126/995</u>	<u>5</u>	<u>3</u>	<u>NW</u>	BIT	<u>28101</u>	<u>450m</u>	<u>US</u>
PUMP	<u>352/108</u>	<u>6</u>	<u>2</u>	<u>NW</u>	R/SHELL	<u>7746/4</u>	<u>4.50m</u>	<u>FAIR</u>
TRAILER	<u>3655</u>		<u>8</u>		C/SHOE	<u>9088/6</u>	<u>NIL</u>	<u>good</u>
VEHICLE	<u>3654</u>	<u>3</u>						

NOTE ANY REMARKS OR DELAYS:

Carried out packer pressure test

G. De Thomas DRILLER DATE 07/03/83 [Signature] INSPECTOR DATE 07/3/83 [Signature] GEOLOGIST DATE 1/1

M.M.B.W.

No 13005

DRILLER'S REPORT (FOR SHIFT 08/03/83 (DATE))PROJECT SILVAN Reg. DAN SURVEILLANCELOCATION SILVANHOLE No. 12LIST No. LD/101

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	8 ⁰⁰	36.00m	24.00m	30.20	
END OF SHIFT	4 ⁰⁰	48.80m	24.00m	28.00m	
DRILLING METHODS SIZE & DEPTH	ROTARY N.M.L.C.				DRILLING FLUID Water

DRILLING PROGRESS each run or operation to be listed.					
DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
36.00	37.50	CORING	1.50	NIL	siltstone DP4 grey Very Hard F.SP. 10-160mm
37.50	38.50	CORING	1.00	NIL	siltstone DP4 grey Very Hard F.SP. 10-150mm
38.50	39.00	CORING	0.50	NIL	siltstone DP4F grey Very Hard F.SP. 10-100mm
39.00	39.80	CORING	0.80	NIL	siltstone DP4F grey Very Hard F.SP. 10-130mm
39.80	40.30	CORING	0.50	NIL	siltstone DP4F grey Very Hard F.SP. N.E.
40.30	40.50	CORING	0.20	NIL	siltstone DP4F grey Very Hard F.SP. N.E.
40.50	40.80	CORING	0.25	NIL	siltstone DP4F grey Very Hard F.SP. N.E.

BORE HOLE COMPLETION DETAILS				TOTAL DEPTH	
DRILLING CREW	NAME	START	FINISH	HOURS	
DRILLER	G. De Thomassin	7:5	5:5	9:12	
HELPER	G. Lenville	7:5	5:5	8:60	

PLANT RETURN: JOB No. <u>49243</u>					DIAMOND TOOLS RETURN			
ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	12/6/985	7	1	NW	BIT	28101	4.80m	U.S.
PUMP	35/2/108	7	1	NW	R/SHELL	7746/4	4.80	F.A.I.R.
VEHICLE TRAILER	3512	3			C/SHOE	8088/6	NIL	good
VEHICLE	3655		8	NW				

NOTE ANY REMARKS OR DELAYS:

G. De Thomassin 08/03/83 DATE
 DRILLER INSPECTOR GEOLOGIST DATE

M.M.B.W.

No 13006

DRILLER'S REPORT (FOR SHIFT 09/03/83)PROJECT SILVAN RES. DAM SURVEILLANCELOCATION SILVANHOLE No. 19LIST No. LD/101

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	<u>8⁰⁰</u>	<u>40.80 m</u>	<u>24.00m</u>	<u>30.20</u>	
END OF SHIFT	<u>4⁰⁰</u>	<u>41.60m</u>	<u>24.00m</u>	<u>30.00m</u>	
DRILLING METHODS SIZE & DEPTH	<u>ROTARY</u> <u>NMLC</u>				DRILLING FLUID <u>WATER</u>

DRILLING PROGRESS each run or operation to be listed.

DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
<u>40.80</u>	<u>41.00</u>	<u>CORING</u>	<u>0.20</u>	<u>NIL</u>	<u>Siltstone DP4F grey very Hard</u> <u>F.S.P. N.E.</u>
<u>41.00</u>	<u>41.60</u>	<u>CORING</u>	<u>0.60</u>	<u>NIL</u>	<u>Siltstone DP4F grey very Hard</u> <u>F.S.P. N.E.</u>
					<u>Completed bore at 41.60m</u> <u>CARRIED OUT PACKER PRESSURE</u> <u>TEST. PLACED PIEZOMETER</u> <u>AT 41.00m</u> <u>BACK FILLED</u> <u>WITH SAND TO 39m</u> <u>PLACED BENTONITE PALLETS</u> <u>AT 39.00m.</u>

BORE HOLE COMPLETION DETAILS

TOTAL DEPTH 41.60m

DRILLING CREW	NAME	START	FINISH	HOURS
DRILLER	<u>G. De THOMASIS</u>	<u>7⁰⁰</u>	<u>5¹⁵</u>	<u>7 3/4</u>
HELPER	<u>G. VERRILLE</u>	<u>7¹⁵</u>	<u>5¹⁵</u>	<u>8 + 60</u>

PLANT RETURN: JOB No. 69243

DIAMOND TOOLS RETURN

ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	<u>12/6/985</u>	<u>4</u>	<u>4</u>	<u>NW</u>	BIT	<u>28101</u>	<u>0.80m</u>	<u>US</u>
PUMP	<u>35/2/102</u>	<u>5</u>	<u>3</u>	<u>NW</u>	R/SHELL	<u>7746/4</u>	<u>0.80</u>	<u>FAIR</u>
VEHICLE TRAILER	<u>3512</u>	<u>3</u>			C/SHOE	<u>8088/6</u>	<u>NIL</u>	<u>good</u>
VEHICLE	<u>3655</u>		<u>8</u>					

NOTE ANY REMARKS OR DELAYS:

11 70 3649

DRILLER

09/03/83

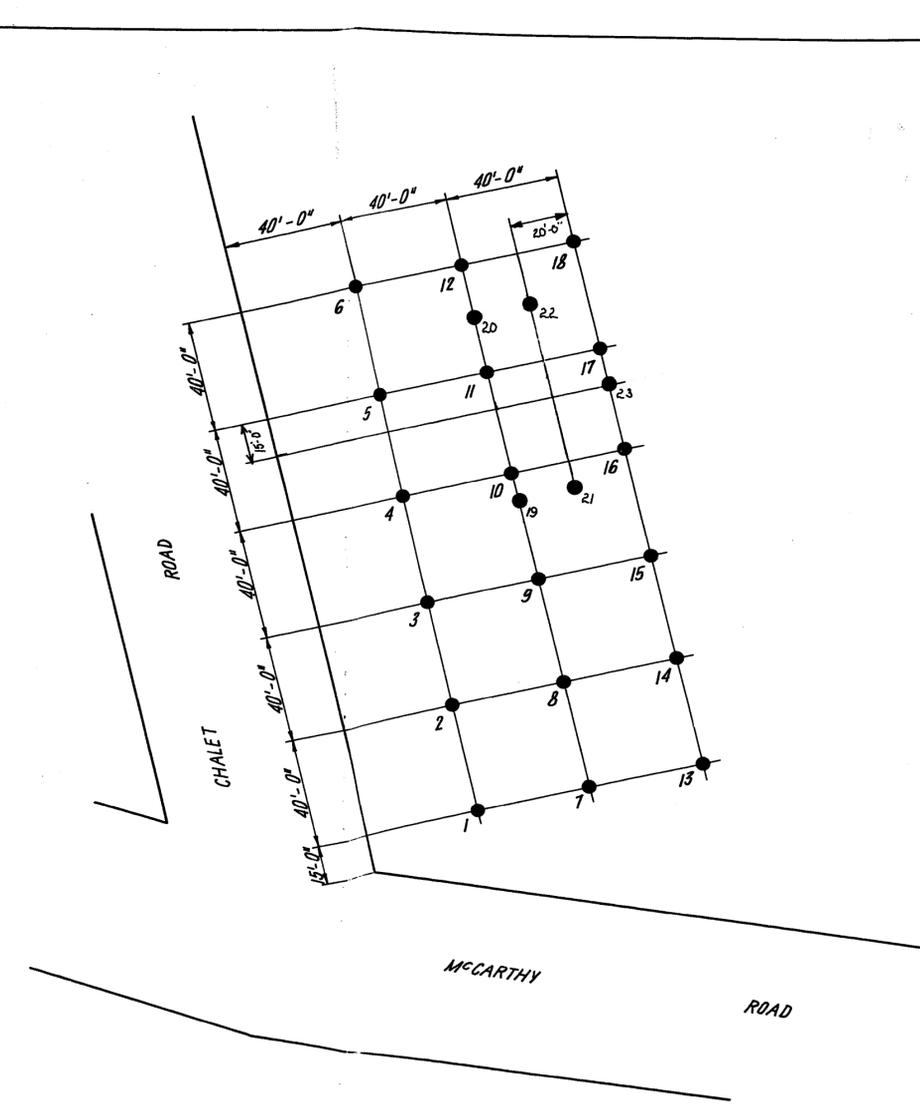
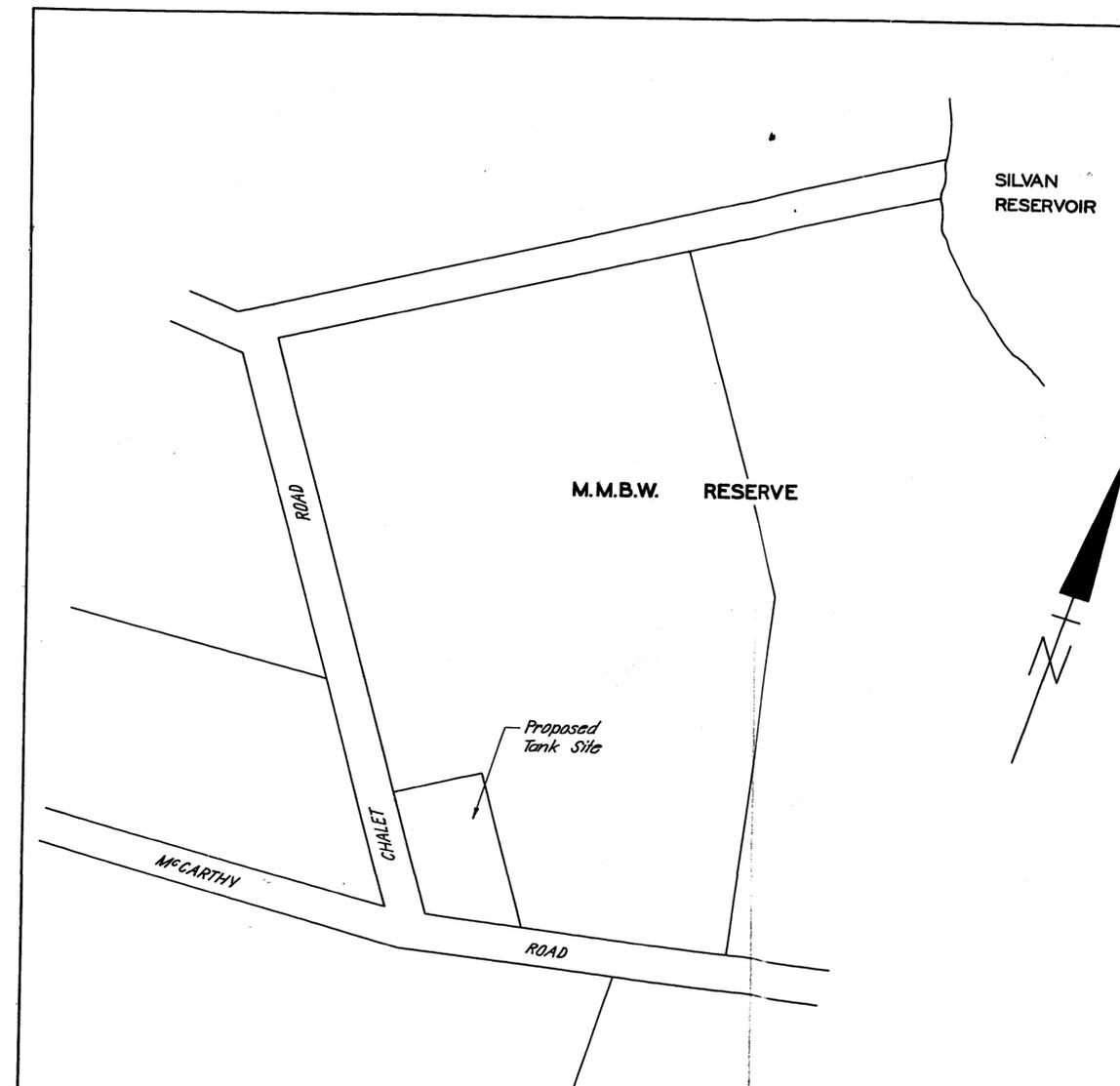
DATE

INSPECTOR

DATE

GEOLOGIST

DATE



NOTE :-

Bores to be 13 feet deep or 3 feet into hard rock.

SYMBOLS AND GENERAL NOTES
Bore shown thus ●
The information contained herein has been obtained by the Board for its own purposes. While it is made available to the intending Tenderers, no representation or warranty as to the correctness of any such information is or is to be deemed to be given. An intending tenderer should make his own examination and form his own conclusions as to the nature of the excavation required and the Works comprised in the Contract.

MELBOURNE AND METROPOLITAN BOARD OF WORKS
INVESTIGATION AND DESIGN DIVISION
SHIRE OF LILLYDALE
MT DANDENONG RIDGE AREA
MONBULK (MCCARTHY ROAD) RESERVOIR
LOCALITY PLAN OF BORES

SCALE :- As shown

WP. INDEX PL. NO.

TRACED J.C. 16-10-80 CHECKED

REF. NO. LD 15

16

2

15

4

MICROBOX

18 11 1980

3

2

1 of 16

BORE LIST No. _____ LD / 15

MUNIC. _____ LILYDALE

ORIGINAL BORE LIST

**THIS BORE LIST MUST BE RETURNED AND
NOT ATTACHED TO ANY OTHER FILE**

11.65.2595

(Engineer, Estimating)
Plotted on Plan No. _____ and List filed.

Recorded by _____

Date _____

Engineer, Estimating

Form No. Con. 76

110 711 279

280 W ME 122 69

M.M.B.W. — INVESTIGATION AND DESIGN DIVISION
GROUND INVESTIGATION

File No. 68/17622
REQUISITION FOR BORES, SHAFTS, TRENCHES
(For Instructions see back of sheet)

List No. L.D.15. (2)

1. Requisition — Bores, shafts, trenches are required as shown on the attached plan numbered 1-2/15 and in accordance with the details shown below. One tracing linen plan, one linen and three paper prints herewith.

Municipality hily dala No. of bores, shafts, trenches 18
Project MT. Dandnary Ridge Area - Monbelle (MCCAR 7127 RD) Reservoir

Locations and required depths are shown on plan. The exact sites have not been marked on the ground. (If marked, state in what manner.)

Ref. F.B. _____ P. _____
Cores/samples are/ are not required to be kept for the period ending at least 12 months.

Ground water chemical analysis is not required.

The cost of the work should be charged to MT. Dandnary Ridge Area Job No. D24002

Notices were sent to land owners, etc., on _____ Results of the investigation are required by one week (This work is URGENT)

To Investig. & Design Div. (Engineer, Estimating) Requisitioner R.C. Hart Project Engineer, M.W.S.D. Title _____ Date 19.10.70

2. Recording — This requisition has been given a list number and recorded. The tracing cloth plan has been detached and is held, and one linen and two paper prints are forwarded herewith. Please arrange for the work to be done.

Notice was sent to municipality on Not Recd. A copy of this Requisition has/has not been sent to Engineer, Hydraulics & Soil Testing, for information.

To Chief Construction Engineer (Ground Investigation) W. Marshall 29/10/70
Engineer, Estimating Date

3. Order — Construction Division record has been made. The work will be done by —

(a) Day Labour. One linen and one paper print of plan herewith. Purchase Order No. _____

(b) Contract. Contractor _____ The contractor states that he will commence work on _____ He has been given the linen print of the plan. One paper print is forwarded herewith for your use.

To Inspector, Ground Investigation W. Marshall 21/10/70
Eng., Ground Investigation Date

4. Execution — The work required was done by F. MONTABERTO between 29.10.70 and 5.11.70

Original log sheets (6 No.) are attached herewith together with 4 copy/copies of the plan with any amendments marked thereon.

To Engineer, Ground Investigation W. Marshall 5.11.70
Inspector, Ground Investigation Date

5. Report — Construction Division record has been made. Payment of the contractor has been recommended. Services Rendered Note No. _____

Log sheets (6 No.) and _____ copy/copies of plan are forwarded herewith. No. of bores, shafts trenches _____

To Investg. & Design Div. (Engineer, Estimating) W. Marshall 6/11/70
Chief Constr. Eng. Date

6. Completion — Ground Investigation Recording Section to note _____ The work required by you has been completed. Herewith original log sheets and _____ copy/copies of plan. Please return all to me.

To (Requisitioner) Mr R.C. Hart - M.S. Design 23.11.70
Engineer, Estimating Date

7. Recording and Filing — Returned to you for filing.

Requisitioner _____ Date _____

To Investg. & Design Div. (Engineer, Estimating)

Plotted on Plan No. _____ and List filed.

Engineer, Estimating _____ Recorded by _____ Date _____

M.M.B.W. - CONSTRUCTION DIVISION
GROUND INVESTIGATION

(3)

File No.

List No. LD/15

LOG OF BORES

Sheet No. 1 of 6

Municipality SHIRE OF LILLYDRIFE

Drawing No.

Project MT. DEPENDONG RIDGE AREA, MOWBULL - MCURTLEY RD. RESERVE

Driller E. MCINTYRE Drilling Machine DA 5

Core/Auger Dia. 7/8 in. Commenced 27-10-70 Completed 5-11-70

The description of materials is in accordance with the "Classification of Rock and Soil Types, for use by Drillers" and the "Definitions of Terms for Rock and Soil Types", issued by direction of the Engineer in Chief, 17-5-60.

Bore No.	Position	Depth from Surface	Material		Remarks
			Type	Other Description	
1	TOP ON PLAIN	0-4	CLAY	FIRM RED BROWN	962.4
		4-11	CLAY	STIFF YELLOW & RED BROWN, WITH SEAMS OF MUDSTONE	962.7
		(27-10-70) 11-13	MUDSTONE	SOFT PINK & YELLOW	962.8
2	-	0-2	CLAY	FIRM BROWN	962.2
		2-6	CLAY	STIFF RED BROWN WITH SEAMS OF MUDSTONE	962.2
		6-13	MUDSTONE	FRACTURED MEDIUM TO HARD YELLOW GREY	656.2
3	-	0-2	CLAY	FIRM BROWN	962.2
		2-4	CLAY	STIFF RED BROWN WITH SEAMS OF MUDSTONE	962.2
		4-13	MUDSTONE	FRACTURED MEDIUM TO HARD BROWN & GREY, WITH SEAMS OF SANDSTONE & CLAY	962.2
(NO WATER IN BORES)					

Log compiled by [Signature]

Date 28-10-70

Checked [Signature]

Inspector, Ground Investigation.

Date 5-11-70

Form No. Con. 7 1960 June 1960

Form No. Cgg78

M.M.B.W. - CONSTRUCTION DIVISION
GROUND INVESTIGATION

5

File No.

List No. 12/15

Sheet No. 3 of 6

LOG OF BORES

Bore No.	Position	Depth from Surface	Material		Remarks
			Type	Other Description	
7	ASC ON PLAIN D-1	0-1	CLAY	SOFT BROWN	
		1-36"	CLAY	FIRM RED BROWN	
		36-56"	MUDSTONE	RED BROWN & GREY MEDIUM, WITH SEAMS OF IRONSTONE	
		56-78"	MUDSTONE	SOFT TO MEDIUM RED BROWN, WITH SEAMS OF IRONSTONE	
8	- - -	0-1	CLAY	SOFT BROWN	
		1-36"	CLAY	STIFF RED BROWN WITH SEAMS OF MUDSTONE	
		36-46"	MUDSTONE	FRACTURED TO SOFT TO MEDIUM RED BROWN WITH SEAMS OF IRONSTONE	
		46-78"	MUDSTONE	FRACTURED MEDIUM TO HARD RED BROWN, WITH SEAMS OF IRONSTONE	
9	- - -	0-2	CLAY	SOFT BROWN	
		2-3	CLAY	FIRM RED BROWN	
		3-4	CLAY	STIFF RED BROWN	
		4-13	MUDSTONE	FRACTURED SOFT TO MEDIUM RED BROWN & GREY, WITH SEAMS OF IRONSTONE	

Log compiled by *[Signature]*

Checked *[Signature]* Inspector, Ground Investigation

Form No. Con 3

Date 3-0-10-70

Date 5-11-70

M.M.B.W. - CONSTRUCTION DIVISION
GROUND INVESTIGATION

6

File No.

List No. LD/15

Sheet No. 1 of 6

LOG OF BORES

Bore No.	Position	Depth from Surface	Material		Remarks
			Type	Other Description	
10	E.C. ON PLAN	0-2	CLAY	SOFT RED BROWN	
		2-7	CLAY	SOFT RED BROWN & GREY, WITH SEAMS OF MUDSTONE	
		7-9	MUDSTONE	SOFT BROWN GREY	
		9-13	MUDSTONE	MEDIUM TO HARD BROWN, WITH SEAMS OF IRONSTONE	
(30-10-70)					
11	- - -	0-2	CLAY	SOFT RED BROWN	
		2-3	CLAY	SOFT RED BROWN WITH SEAMS OF MUDSTONE	
		3-13	MUDSTONE	FRACTURED MEDIUM TO HARD BROWN WITH SEAMS OF IRONSTONE & CLAY	
		(31-10-70)			
12	- - -	0-2	CLAY	FIRM RED BROWN	
		2-9 1/2	MUDSTONE	SOFT TO MEDIUM RED BROWN, WITH SEAMS OF IRONSTONE & CLAY	
		9 1/2-15	MUDSTONE	FRACTURED MEDIUM TO HARD RED BROWN WITH SEAMS OF IRONSTONE & CLAY	

Log compiled by [Signature]

Date 30-10-70

Checked [Signature] Inspector, Ground Investigation

Date 5 11 70

M.M.B.W. - CONSTRUCTION DIVISION
GROUND INVESTIGATION

10/15/70
8

File No.

List No. 20/15

Sheet No. 6 of 6

LOG OF BORES

Bore No.	Position	Depth from Surface	Material		Remarks	
			Type	Other Description		
16	E.C. ON PLAN	0-1	CLAY	SOFT BROWN		
		1-2	CLAY	STIFF RED BROWN		
		2-7 1/2	CLAY	STIFF RED BROWN		
				WITH PARTICLES OF IRONSTONE		
		7 1/2-13	MUDSTONE	SOFT RED		
	(4-11-70)		BROWN GREY & PINK			
17	- - -	0-3	CLAY	SOFT BROWN		
		3-11 1/2	CLAY	STIFF RED BROWN		
				WITH PARTICLES OF IRONSTONE		
		11 1/2-11	MUDSTONE	SOFT RED BROWN		
				& GREY, WITH HARD SEAMS OF IRONSTONE & SANDSTONE		
		11-13	MUDSTONE	MEDIUM TO HARD		
				RED BROWN, WITH SEAMS OF IRONSTONE		
18	- - -	0-1	CLAY	SOFT BROWN		
		1-16	CLAY	FIRM RED BROWN		
		16-8	MUDSTONE	SOFT TO MEDIUM		
				RED BROWN, WITH SEAMS OF IRONSTONE		
		8-10 1/2	MUDSTONE	MEDIUM	RED BROWN	
	(5-11-70)	10 1/2-13	MUDSTONE	FRAGMENTED		
			HARD BROWN WITH SEAMS OF IRONSTONE			
	(NO WATER IN BORES)					

Log compiled by *[Signature]*

Date

Checked *[Signature]* Inspector, Ground Investigation

Date 5-11-70

REQUISITION FOR BORES, SHAFTS, TRENCHES

(For Instructions see back of sheet)

List No. LD/15 401 (9)

1. Details — Bores, etc. numbered 19-23 are required as shown on attached plan and in accordance with the details shown below. One tracing linen plan, two linen and three paper prints herewith.

Municipality LILLYDALE No of ⁴Shafts Bores 5 Trenches

Project title MONAULK RESERVOIR - STAGE 2

The cost of the work should be charged to DESIGN SERVICE REC. - GENERAL Job No. X 14498

Locations and required depths are shown on plan. The exact sites ^{have} ~~have not~~ been marked on the ground. (If marked, state in what manner.)

copy of F.B. attached Ref. F.B. 5223 P 159

~~Some~~ ^{are} Samples are not required to be kept for the period ending

Ground water chemical analysis ^{is} ~~is not~~ required.

Notices were sent to land owners and authorities on MMBN PROPERTY

Requisitioning Officer A.J. SEMKOWSKI 4429 Phone Extension

DeMartino Name — BLOCK LETTERS

Signature of Authorising Officer

Water Supply Division and Section

4.2.80 Date

To Senior Estimator (Estimating Group)

RESULTS OF THE INVESTIGATION ARE REQUIRED BY 25 Feb. 1980 (A date must be inserted)

2. Recording — This requisition has been given a list number and recorded. The tracing has been detached and is held, and two linen and two paper prints are forwarded herewith. Please arrange for the work to be done. Notices were sent to municipality on 6.2.80

✓ GARDINER. Senior Estimator 6/2/80 Date

To Scientific Services Department (Ground Investigation Section)

3. Order — The office record has been made. One linen and one paper print herewith. Please proceed with work

DWR Bamford Eng. Ground Investigation 7.2.80 Date

To Inspector, Ground Investigation

4. Execution — The work required was done by J. BALSSONE between 12.2.80 and 19.2.80

Original log sheets (6 No.) are attached hereto, together with ONE *copy of plan with any amendments marked thereon.

DWR Bamford Inspector, Ground Investigation 25-3-80 Date

To Engineer, Ground Investigation

5. Report — The office record has been made.

Log sheets (6 No.) and 1 *copy of plan are forwarded herewith.

DWR Bamford Engineer, Ground Investigation 25-3-80 Date

To Senior Estimator (Estimating Group)

6. Completion — Estimating Group Recording Section to note

The work required by you has been completed. Herewith original log sheets and *copy of plan. Please return all to me.

To for Senior Estimator Date

7. Recording and Filing — Returned to you for filing

To Senior Estimator (Estimating Group)

Requisitioning Officer Date

8. Completion — Plotted on Plan No. and List filed.

1. Deane Recorded by 27.1.80 Date

Estimating Group Bore Records

REQUISITIONERS COPY

M.M.B.W.

DRILLER'S REPORT (FOR SHIFT 12/2/80)

No 10407 (10)

PROJECT MUNBULK RESERVOIR TANK SITE
LOCATION SEILVAN DAM

HOLE No. 19

LIST No.

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	8:00 AM	0			
END OF SHIFT	3:30 PM	6M	0080mm	3M	
DRILLING METHODS SIZE & DEPTH	ROTARY N M L C				DRILLING FLUID WATER

DRILLING PROGRESS each run or operation to be listed.

DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
00	65mm	NMLC CORE	65m	NIL	HORNFEELS DP1F YELLOW BROWN WEAK FRACT CANNOT BE ESTIMATED
65mm	120m	" " "	55m	NIL	HORNFEELS DP3F BROWN HARD FRACT. CANNOT BE ESTIMATED
120m	155m	" " "	35m	NIL	HORNFEELS DP1F BROWN/WEAK
155m	3M	" " "	145m	NIL	HORNFEELS DP3 BROWN HARD AV. SP. 100-200mm
3M	450m	" " "	150m	NIL	HORNFEELS DP3FBROWN, YELLOW HARD AV. SP. 100-200mm
450m	6m	" " "	150m	NIL	HORNFEELS DP3F YELLOW BROWN HARD AV. SP SOME 200mm

BORE HOLE COMPLETION DETAILS

TOTAL DEPTH.....

DRILLING CREW	NAME	START	FINISH	HOURS
DRILLER	J. BALASSONE	7:00 AM	5:55 PM	9 3/4
HELPER	G. VENVILLE	7:15 AM	5:15 PM	8 1/2 HOURS

PLANT RETURN: JOB No. 114552					DIAMOND TOOLS RETURN			
ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	62-4-971	5	2	NW	BIT	84237	6M	
			1	M				
PUMP	85-2-257	5	3	NW	R/SHELL	64895	6M	
TRAILER					C/SOE			
VEHICLE	3759	3						

NOTE ANY REMARKS OR DELAYS:

ONE HOUR MOVING DRILL RIG AND SET UP ON BORE HOLE

J. Balassone 12/2/80 DATE DRILLER
 W. Ken H. 12/2/80 DATE INSPECTOR
 / / DATE GEOLOGIST

REQUISITIONERS COPY

M.M.B.W.

DRILLER'S REPORT (FOR SHIFT 18/2/80 (DATE))

No 10411

PROJECT M.O.M BULK TANK SITELOCATION S.I.L.K.A.M. DAMHOLE No. 21

LIST No.

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	9:00 AM	150M			
END OF SHIFT	3:30 PM	6M			
DRILLING METHODS SIZE & DEPTH	ROTARY N MLC				DRILLING FLUID WATER

DRILLING PROGRESS each run or operation to be listed.

DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
150M	210M	N MLC	70cm	NIL	HORNFEELS DP1F YELLOW BROWN WEAK FRACTURING AV.SP. CANNOT BE ESTIMATED
210M	3M	" " "	45cm	NIL	HORNFEELS DP1-2F BROWN MEDIUM FRACTURING AV.SP. CANNOT BE ESTIMATED
3M	4'50M	" " "	150M	NIL	HORNFEELS DP1-3F YELLOW BROWN HARD FRACTURING AV.SP. CANNOT BE ESTIMATED
4'50M	4'90M	" " "	40cm	NIL	HORNFEELS DP1F BROWN WEAK FRACTURED CANNOT BE ESTIMATED
4'90M	6M	" " "	090cm	NIL	HORNFEELS DP 3 BROWN HARD AV.SP. 0.50MM
BH23A UD					
00 80cm	115M	UD 3" TUBE	28cm		SILTY CLAY BROWN MOIST FIRM MOIST
145	168M	" " "	23cm	NIL	SILTY CLAY BROWN STIFF

BORE HOLE COMPLETION DETAILS

TOTAL DEPTH.....

DRILLING CREW	NAME	START	FINISH	HOURS
DRILLER	J. BALASSONE	7:15 AM	5:15 PM	9 1/2
HELPER	G. VENVILLE	7:15 AM	5:15 PM	8 1/45 MINS

PLANT RETURN: JOB No. <u>214552</u>					DIAMOND TOOLS RETURN			
ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	624-971	5	2	NW	BIT	84237	4'50M	
			1	M				
PUMP	852-257	6	3	NW	R/SHELL	6485/5	4'50M	
TRAILER					C/SHOE			
VEHICLE	3759	3						

NOTE ANY REMARKS OR DELAYS:

J. Balassone 18/2/80 DATE DRILLER
 W. Keith 18/2/80 DATE INSPECTOR
 _____ DATE GEOLOGIST

REQUISITIONERS COPY

M.M.B.W.

No 10408 12

DRILLER'S REPORT (FOR SHIFT 13/2/80 (DATE))

PROJECT MAIN BULK RES TANK SITE

LOCATION SILMAN DAM

HOLE No. 20 & 22

LIST No.

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	8:30 AM	0			
END OF SHIFT	3:30 PM	450M	150M		
DRILLING METHODS SIZE & DEPTH	ROTARY N MLC				DRILLING FLUID WATER

DRILLING PROGRESS each run or operation to be listed.						
DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.	
FROM	TO					
BH20 0.0	120M	N MLC	110M	NIL	HORNfels DP3 BROWN HARD AVSP. 50-150MM	
120M	185M	" " "	65MM	NIL	HORNfels DRIF BROWN WEAK FRACT. AV.SP. CANNOT ESTIMATED	
185	3M	" " "	115M	NIL	HORNfels DP3 YELLOW BROWN HARD AV. SP. 50MM-200MM WITH 200MM D.P.E. 200M-2.50M	
3M	450M	" " "	150M	NIL	HORNfels DP3 BROWN HARD AV SP 50MM-100MM	
BH22	0.0	800MM	N MLC	800MM	NIL	CLAY REDDISH BROWN DRY STIFF
800MM	150M	" "	60MM	NIL	CLAY YELLOW BROWN MOIST STIFF WITH SMALL PIECES OF HORNfels	

BORE HOLE COMPLETION DETAILS				TOTAL DEPTH	
DRILLING CREW	NAME	START	FINISH	HOURS	
DRILLER	J. BALASSONE	7:00 AM	5:15 PM	9 3/4	
HELPER	G. VENVILLE	7:15 AM	5:15 PM	8:60 MINS	

PLANT RETURN: JOB No. <u>14552</u>				DIAMOND TOOLS RETURN				
ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	624.472	5	1	NW	BIT	84277	6M	
			1	M				
PUMP	852.257	6	2	NW	R/SHELL	64855	6M	
TRAILER					C/SHOE			
VEHICLE	3759	3						

NOTE ANY REMARKS OR DELAYS:
making DRILL Rig to BORE 20 & TO 22

J. Balassone 13/2/80 DATE DRILLER
W. Keith 13/2/80 DATE INSPECTOR
11 70 3849 DRILLER DATE INSPECTOR GEOLOGIST DATE

REQUISITIONERS COPY

M.M.B.W.

No 10409

DRILLER'S REPORT (FOR SHIFT 14-2-80 (DATE))PROJECT MUNBULK RESERV. TANK SITE
LOCATION SILKIN DAMHOLE No. 22

LIST No.

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	8:30 AM	150M			
END OF SHIFT	3:30 PM	7M	150M		
DRILLING METHODS SIZE & DEPTH	ROTARY NMLC				DRILLING FLUID WATER

DRILLING PROGRESS each run or operation to be listed.					
DEPTH		OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
FROM	TO				
1.50M	2.70M	NMLC	120M	NIL	HORNFEELS DP1F BROWN & GREY WEAK FRACTURING CANNOT BE ESTIMATED
2.70M	4.20M	"	150M	NIL	HORNFEELS DP1F BROWN WEAK CANNOT BE ESTIMATED
4.20M	5M	"	80cm	NIL	HORNFEELS DP3 BROWN HARD AV.SP 40mm 100mm
5M	5.70M	"	70cm	NIL	HORNFEELS DP3F BROWN HARD AV.SP. CANNOT BE ESTIMATED
5.70M	6.50M	"	80cm	NIL	HORNFEELS DP3 BROWN HARD AV.SP 75mm 250mm
6.50M	7M	"	50cm	NIL	HORNFEELS DP2J3F MEDIUM AV.SP. CANNOT BE ESTIMATED
B.H. 23					
C.C.	1.50M	NMLC	120M	-	CLAY BROWN MOIST FIRM

BORE HOLE COMPLETION DETAILS				TOTAL DEPTH	
DRILLING CREW	NAME	START	FINISH	HOURS	
DRILLER	J BALASSONE	7:00 AM	5:15 PM	43 1/4	
HELPER	G VENVILLE	7:15 AM	5:15 PM	8460 MINS	

PLANT RETURN: JOB No. 114552					DIAMOND TOOLS RETURN			
ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	674.971	6	1	NW	BIT	84237	7M	
			1	M				
PUMP	852.257	5	3	NW	R/SHELL	6485/5	7	
TRAILER					C/SHOE			
VEHICLE	3754	3						

NOTE ANY REMARKS OR DELAYS:

ONE HOUR MOVING DRILL RIG TO BORE 23 AND SET UP

J. Balassone 14/2/80 DATE
DRILLER
11 76 849

A. Meith 14/3/80 DATE
INSPECTOR

1 / 1 DATE
GEOLOGIST

REQUISITIONERS COPY

M.M.B.W.

No 10410

14

16

DRILLER'S REPORT (FOR SHIFT 15/2/80 (DATE))

PROJECT MONBULK TANK SITE
 LOCATION SILKMAN DAM

HOLE No. 23
 LIST No.

	TIME	HOLE DEPTH	CASING DEPTH	WATER LEVEL	WATER STRUCK
START OF SHIFT	8:30 AM	150M	0	-	
END OF SHIFT	3:30 PM	740M	250M	-	
DRILLING METHODS SIZE & DEPTH	ROTARY NMLC				DRILLING FLUID WATER

DRILLING PROGRESS each run or operation to be listed.

DEPTH FROM	DEPTH TO	OPERATION OR DRILLING RUN	LENGTH OF CORE	FLUID LOSS %	DESCRIPTION OF SOIL OR ROCK, TYPE OF SLUDGE TEST RESULTS.
150M	180M	NMLC	300M	NIL	CLAY RED BROWN MOIST STIFF
180M	3M	NMLC	120M	NIL	HORNFEELS DP1 F BROWN WEAK FRACTURING AV.SP. CANNOT BE ESTIMATED
3M	360M	NMLC	60M	NIL	HORNFEELS DP1 F BROWN WEAK FRACTURED AV.SP. CANNOT BE ESTIMATED
360M	450M	NMLC	65M	NIL	HORNFEELS DP2 BROWN MEDIUM AV.SP. 40mm 60mm
450M	525M	NMLC	75	NIL	HORNFEELS DP2 F YELLOW BROWN MEDIUM. AV.SP. CANNOT BE ESTIMATED
525M	690M	NMLC	155M	NIL	HORNFEELS DP1 BROWN WEAK
690M	740M	NMLC	50M	NIL	HORNFEELS DP2 LIGHT BROWN AV.SP. 50mm 150mm
BH 21					
0-0	1M	S-T-B-CORE	1M	NIL	CLAY RED BROWN MOIST STIFF
1M	150M	"	50M	NIL	CLAY YELLOW BROWN MOIST STIFF GRITTY

BORE HOLE COMPLETION DETAILS TOTAL DEPTH.....

DRILLING CREW	NAME	START	FINISH	HOURS
DRILLER	J. BALASSONE	7:00 AM	5:15 PM	9 3/4
HELPER	G. VENVILLE	7:00 AM	5:15 PM	8 3/4 HRS MINS

PLANT RETURN: JOB No. 14552					DIAMOND TOOLS RETURN			
ITEM	M.M.B.W. No.	WORK HRS.	IDLE HRS.	REASON	ITEM	SERIAL No.	DRILLED	CONDITION
DRILL	62-4-971	6	1	NW	BIT	84237	5.90M	
			1	M				
PUMP	85-2-251	6	2	NW	R/SHELL	6485/5	5.90M	
TRAILER					C/SHOE			
VEHICLE	3759	3						

NOTE ANY REMARKS OR DELAYS:
 PAVING DRILL RIG TO BORE 21 AND SET UP

J. Balassone 15/2/80 DATE DRILLER
 W. Keith 15/2/80 DATE INSPECTOR
 GEOLOGIST DATE

1 OF 16.
BORE LIST No. _____ LD / 15

MUNIC. _____ LILYDALE _____

ORIGINAL BORE LIST

**THIS BORE LIST MUST BE RETURNED AND
NOT ATTACHED TO ANY OTHER FILE**

C.3 WR49 Monbulk Tank Cutting (Melbourne Water)



Figure C-3. Rock cutting at WR49 Monbulk Tank site (Melbourne Water).

Appendix D. Site Walkover Notes

Site walkover photos and observations are included in Table D-1, with the respective photo locations shown on Figure D-1 below.



Figure D-1. Site walkover photo locations (MetroMap, 2023)

Table D-1. Site walkover observation notes

Location ID	Photo	Geological Zone	Observation Notes
1		01 Older Volcanics	<p>Mild to moderate vegetation.</p> <p>No signs of rock outcrops.</p> <p>Flat terrain.</p>
2		01 Older Volcanics	<p>Conditions representative of majority of the eastern region.</p> <p>Predominately flat terrain with mild vegetation with no rock outcrops or boulders visible.</p>

Location ID	Photo	Geological Zone	Observation Notes
3		01 Older Volcanics	Near Gate 07. A recently excavated trench and spoil near fence alignment with red brown clay to at least 1 m bgl.

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
4		01 Older Volcanics	Spoil from trench in above photo.
5		02 Humevale Formation overlain with Older Volcanics soils / 03 Fill, Alluvial and Colluvial Soils and potential floaters	<p>South reservoir wall.</p> <p>Fence in good condition with no signs of movement.</p> <p>No rock outcrops visible.</p>

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
6		04 Humevale Formation	Drainage embankment cut shows residual soils at least 500 mm deep.
7		04 Humevale Formation	<p>Mild to heavy vegetation.</p> <p>No signs of rock outcrops.</p> <p>Increasing elevation moving south to north, mild slope.</p> <p>Overhead branches present.</p>

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
8		04 Humevale Formation	Embankment cutting adjacent WR49 Melbourne Water tanks showing extremely weathered siltstone rock. Can break off by hand, approximately 500 mm bgl.
9		04 Humevale Formation	Residual soil in drain ~600 mm bgl. No rock outcrops visible.

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
10		04 Humevale Formation/ 05 Ferny Creek Rhyodacite	Mild to heavily vegetated region. Terrain begins to drastically increase in elevation from this point for ~ 200 m.

Location ID	Photo	Geological Zone	Observation Notes
11		05 Ferny Creek Rhyodacite	Visible rhyodacite floaters or outcrop. Several large boulders in area.

Geotechnical Desktop Assessment

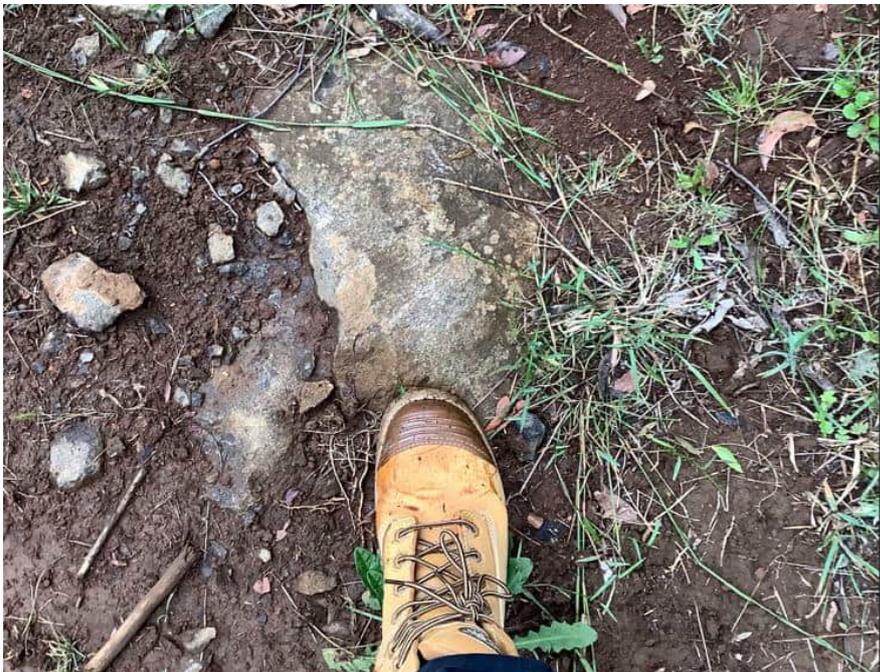
Location ID	Photo	Geological Zone	Observation Notes
12		05 Ferny Creek Rhyodacite	Example of large boulders dispersed throughout this area.

Location ID	Photo	Geological Zone	Observation Notes
13	 A photograph showing a large, dark, mossy boulder situated next to a tree trunk in a wooded area. The boulder is dark grey or black with patches of green moss. The tree trunk is light brown and has a rough texture. The background shows more trees and foliage.	05 Ferny Creek Rhyodacite	Example of large rhyodacite boulder situated adjacent fence alignment.

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
14		05 Ferny Creek Rhyodacite	Rhyodacite floaters or outcrop.

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
15		05 Ferny Creek Rhyodacite	Rhyodacite floaters or outcrop.
16		06 Quartz porphyrite	Fallen tree; exposed residual soil appearing to be a high plasticity clay.

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
17		06 Quartz porphyrite	Outcrops of a dark, much high strength rock, presumably porphyrite.
18		06 Quartz porphyrite	<p>Large gravel and cobbles distributed throughout this area.</p> <p>Photo shows broken rock with interior condition.</p> <p>Potentially imported fill for access track.</p>

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
19		06 Quartz porphyrite	Large rock outcrops, many similar exposed rocks of this type were seen in this area over approximately 50-100 m of fence alignment.

Location ID	Photo	Geological Zone	Observation Notes
20		07 Humevale Formation	Water ponding.

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
21		07 Humevale Formation	<p>Likely example of current fence foundation.</p> <p>Concrete pier approximately 250-300 mm dia, 500 mm deep, with steel post embedded.</p>
22		07 Humevale Formation	Cobbles and coarse gravel of presumably siltstone distributed throughout area, potentially fill or colluvium.

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
23		07 Humevale Formation	Embankment sections shows deep residual soil layering in this region.
24		Colluvium	<p>Creek ~50-100 m north of fence alignment.</p> <p>No obvious signs of rock in embankment.</p> <p>Boulders appear to be artificially placed (may be locally sourced).</p>

Geotechnical Desktop Assessment

Location ID	Photo	Geological Zone	Observation Notes
25	 A photograph showing a muddy, rocky drainage area. In the foreground, the tip of a yellow work boot is visible, standing on a patch of dark, wet mud. The ground is covered with small, dark rocks and debris. To the right, there is a dense area of green and brown vegetation, including grasses and leafy plants. The overall scene appears to be a natural drainage area in a field or wooded area.	07 Humevale Formation	Located ~50-100 m north of fence alignment. Heavy vegetation restricts access to fence. Image shows rock outcrop in drain along Silvan Road

Location ID	Photo	Geological Zone	Observation Notes
26		07 Humevale Formation	Example of the heavy vegetation representative of the northern region. Fence falls behind vegetation ~50 m from where photo was taken

Appendix E. Good Hillside Construction Practice (AGS 2007c)

PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007

APPENDIX G - SOME GUIDELINES FOR HILLSIDE CONSTRUCTION

GOOD ENGINEERING PRACTICE

POOR ENGINEERING PRACTICE

ADVICE

GEOTECHNICAL ASSESSMENT	Obtain advice from a qualified, experienced geotechnical practitioner at early stage of planning and before site works.	Prepare detailed plan and start site works before geotechnical advice.
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PLANNING

SITE PLANNING	Having obtained geotechnical advice, plan the development with the risk arising from the identified hazards and consequences in mind.	Plan development without regard for the Risk.
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DESIGN AND CONSTRUCTION

HOUSE DESIGN	Use flexible structures which incorporate properly designed brickwork, timber or steel frames, timber or panel cladding. Consider use of split levels. Use decks for recreational areas where appropriate.	Floor plans which require extensive cutting and filling. Movement intolerant structures.
SITE CLEARING	Retain natural vegetation wherever practicable.	Indiscriminately clear the site.
ACCESS & DRIVEWAYS	Satisfy requirements below for cuts, fills, retaining walls and drainage. Council specifications for grades may need to be modified. Driveways and parking areas may need to be fully supported on piers.	Excavate and fill for site access before geotechnical advice.
EARTHWORKS	Retain natural contours wherever possible.	Indiscriminatory bulk earthworks.
CUTS	Minimise depth. Support with engineered retaining walls or batter to appropriate slope. Provide drainage measures and erosion control.	Large scale cuts and benching. Unsupported cuts. Ignore drainage requirements
FILLS	Minimise height. Strip vegetation and topsoil and key into natural slopes prior to filling. Use clean fill materials and compact to engineering standards. Batter to appropriate slope or support with engineered retaining wall. Provide surface drainage and appropriate subsurface drainage.	Loose or poorly compacted fill, which if it fails, may flow a considerable distance including onto property below. Block natural drainage lines. Fill over existing vegetation and topsoil. Include stumps, trees, vegetation, topsoil, boulders, building rubble etc in fill.
ROCK OUTCROPS & BOULDERS	Remove or stabilise boulders which may have unacceptable risk. Support rock faces where necessary.	Disturb or undercut detached blocks or boulders.
RETAINING WALLS	Engineer design to resist applied soil and water forces. Found on rock where practicable. Provide subsurface drainage within wall backfill and surface drainage on slope above. Construct wall as soon as possible after cut/fill operation.	Construct a structurally inadequate wall such as sandstone flagging, brick or unreinforced blockwork. Lack of subsurface drains and weepholes.
FOOTINGS	Found within rock where practicable. Use rows of piers or strip footings oriented up and down slope. Design for lateral creep pressures if necessary. Backfill footing excavations to exclude ingress of surface water.	Found on topsoil, loose fill, detached boulders or undercut cliffs.
SWIMMING POOLS	Engineer designed. Support on piers to rock where practicable. Provide with under-drainage and gravity drain outlet where practicable. Design for high soil pressures which may develop on uphill side whilst there may be little or no lateral support on downhill side.	
DRAINAGE		
SURFACE	Provide at tops of cut and fill slopes. Discharge to street drainage or natural water courses. Provide general falls to prevent blockage by siltation and incorporate silt traps. Line to minimise infiltration and make flexible where possible. Special structures to dissipate energy at changes of slope and/or direction.	Discharge at top of fills and cuts. Allow water to pond on bench areas.
SUBSURFACE	Provide filter around subsurface drain. Provide drain behind retaining walls. Use flexible pipelines with access for maintenance. Prevent inflow of surface water.	Discharge roof runoff into absorption trenches.
SEPTIC & SULLAGE	Usually requires pump-out or mains sewer systems; absorption trenches may be possible in some areas if risk is acceptable. Storage tanks should be water-tight and adequately founded.	Discharge sullage directly onto and into slopes. Use absorption trenches without consideration of landslide risk.
EROSION CONTROL & LANDSCAPING	Control erosion as this may lead to instability. Revegetate cleared area.	Failure to observe earthworks and drainage recommendations when landscaping.

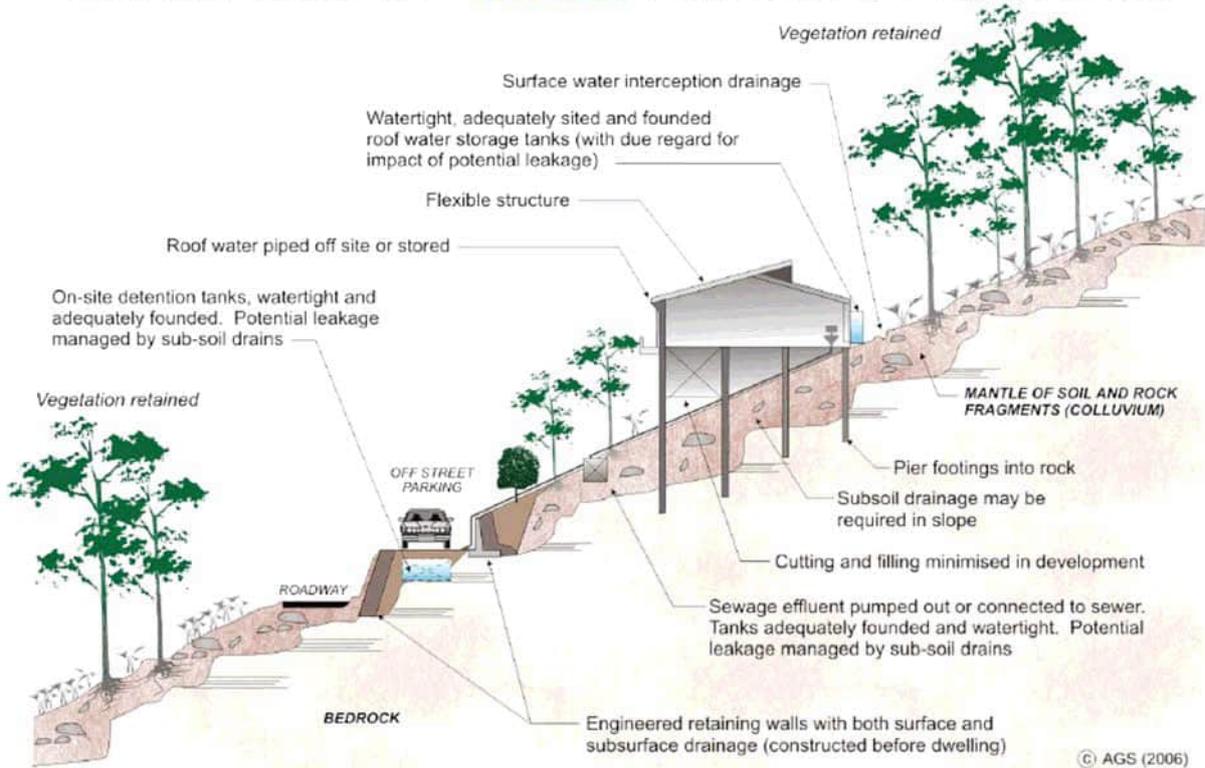
DRAWINGS AND SITE VISITS DURING CONSTRUCTION

DRAWINGS	Building Application drawings should be viewed by geotechnical consultant	
SITE VISITS	Site Visits by consultant may be appropriate during construction/	

INSPECTION AND MAINTENANCE BY OWNER

OWNER'S RESPONSIBILITY	Clean drainage systems; repair broken joints in drains and leaks in supply pipes. Where structural distress is evident see advice. If seepage observed, determine causes or seek advice on consequences.	
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EXAMPLES OF **GOOD** HILLSIDE PRACTICE



EXAMPLES OF **POOR** HILLSIDE PRACTICE

